



9110-04-P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

46 CFR Parts 1, 2, 15, 136, 137, 138, 139, 140, 141, 142, 143, 144, and 199

[Docket No. USCG-2006-24412]

RIN 1625-AB06

Inspection of Towing Vessels

AGENCY: Coast Guard, DHS.

ACTION: Final rule.

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SUMMARY: The Coast Guard is establishing safety regulations governing the inspection, standards, and safety management systems of towing vessels. We are taking this action because the Coast Guard and Maritime Transportation Act of 2004 reclassified towing vessels as vessels subject to inspection and authorized the Secretary of the Department of Homeland Security to establish requirements for a safety management system appropriate for the characteristics, methods of operation, and nature of service of towing vessels. This rule, which includes provisions covering specific electrical and machinery requirements for new and existing towing vessels, the use and approval of third-party organizations, and procedures

for obtaining Certificates of Inspection, will become effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. However, certain existing towing vessels subject to this rule will have an additional 2 years before having to comply with most of its requirements.

DATES: This final rule is effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The incorporation by reference of certain publications listed in the final rule is approved by the Director of the Federal Register on [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Comments and material received from the public, as well as documents mentioned in this preamble as being available in the docket, are part of docket USCG-2006-24412 and are available on the Internet by going to <http://www.regulations.gov>, inserting USCG-2006-24412 in the "Keyword" box, and then clicking "Search."

FOR FURTHER INFORMATION CONTACT: If you have questions on this rule, call LCDR William Nabach, Project Manager, CG-OES-2, Coast Guard, telephone 202-372-1386.

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## I. Abbreviations

2004 Act	Coast Guard and Maritime Transportation Act of 2004
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2010 Act	Coast Guard Authorization Act of 2010
2012 Act	Coast Guard and Maritime Transportation Act of 2012
ABS	American Bureau of Shipping
ABSG	American Bureau of Shipping Group
ABYC	American Boat and Yacht Council
AED	Automatic External Defibrillator
ANSI	American National Standards Institute
AWO	American Waterways Operators
BLS	Bureau of Labor Statistics
CEMS	Crew Endurance Management System
COI	Certificate of Inspection
COTP	Captain of the Port
DHS	Department of Homeland Security
EPIRB	Emergency Position Indicating Radio Beacon
FAST	Fatigue Avoidance Scheduling Tool
FR	<u>Federal Register</u>
FRFA	Final regulatory flexibility assessment
gpm	gallons per minute
GRT	Gross register tons
HIPAA	Health Insurance Portability and Accountability Act of 1996
HOS	Hours of Service
IMO	International Maritime Organization
IRFA	Initial regulatory flexibility analysis
ISM	International Safety Management
ISO	International Organization for Standardization
kPa	Kilopascals
LBP	Length Between Perpendiculars
LCG	Longitudinal Center of Gravity
LORAN	Long Range Aid to Navigation
lpm	liters per minute
MISLE	Marine Information for Safety and Law Enforcement
MMC	Merchant Mariner Credential
MOU	Memorandum of Understanding
MTSA	Maritime Transportation Security Act of 2002
NAMS	National Association of Marine Surveyors
NARA	National Archives and Records Administration
NEC	National Electrical Code
NICET	National Institute for Certification in Engineering Technologies
NFPA	National Fire Protection Association
NPRM	Notice of Proposed Rulemaking
NRTL	Nationally Recognized Testing Laboratory
NTSB	National Transportation Safety Board

NVIC	Navigation and Vessel Inspection Circular
OCMI	Officer in Charge, Marine Inspection
OIRA	Office of Information and Regulatory Affairs
OMB	Office of Management and Budget
OSHA	Occupational Safety and Health Administration
P.E.	Professional Engineer
PFD	Personal Flotation Device
PIC	Person in charge
PPE	Personal Protective Equipment
psi	pounds per square inch
RFA	Regulatory Flexibility Act
§	Section
SAE	Society of Automotive Engineers
SAMS	Society of Accredited Marine Surveyors
SMS	Safety Management System
SBA	Small Business Administration
SOLAS	International Convention for the Safety of Life at Sea, 1974, as amended
STCW	Implementation of the Amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, and Changes to Domestic Endorsements
TPO	Third-party organization
TSAC	Towing Safety Advisory Committee
TSMS	Towing Safety Management System
TVR	Towing vessel record
U.S.C.	United States Code
UWILD	Underwater inspection in lieu of drydocking
VCG	Vertical Center of Gravity
VHF	Very High Frequency
VSL	Value of a statistical life
VTS	Vessel Traffic Service

## II. Executive Summary

### A. Purpose and authority

In 2004, Congress reclassified towing vessels as vessels subject to inspection under part B of subtitle II of title 46, United States Code (U.S.C.), and authorized the Secretary of Homeland Security to establish

requirements for the inspection of towing vessels, their possible use of safety management systems (SMS) and hours of service requirements for them. The legislative history, which pointed to the need for a "full safety inspection of towing vessels," references two towing vessel incidents involving a total of 19 deaths. In September 2001, a towing vessel struck a bridge at South Padre Island, TX. The bridge collapsed, and 5 people died when their cars or trucks went into the water. On May 26, 2002, a towing vessel struck the I-40 highway bridge over the Arkansas River at Webber Falls, OK. The bridge collapsed, and 14 people died when their cars or trucks went into the Arkansas River. 150 Cong. Rec. H6469-01, 2004 WL 1630278; and H.R. Conf. Rep. 108-617, 2004 U.S.C.C.A.N. 936, 951.

This final rule implements most provisions of the Notice of Proposed Rulemaking (NPRM) (76 FR 49976, Aug. 11, 2011) as proposed, but makes changes to address concerns of the public and industry expressed in comments, as is explained below. This rule is authorized and made necessary by the Coast Guard and Maritime Transportation Act of 2004 (2004 Act), Public Law 108-293, 118 Stat. 1028 (Aug. 9, 2004), which made towing vessels subject to inspection. Six years later, the Coast Guard Authorization Act of 2010 (2010 Act), Public Law 111-281, 124 Stat. 2905

(Oct. 15, 2010), directed the Secretary to issue a notice of proposed rulemaking and a final rule.

#### B. Overview of rule

This rule creates a comprehensive safety system that includes company compliance, vessel compliance, vessel standards, and oversight in a new Code of Federal Regulations (CFR) subchapter dedicated to towing vessels. This rule, which (with exceptions) generally applies to all U.S.-flag towing vessels 26 feet or more, and those less than 26 feet moving a barge carrying oil or hazardous material in bulk, lays out both inspection mechanisms as well as new equipment, construction, and operational requirements for towing vessels.

To provide flexibility, vessel operators will have the choice of two inspection regimes. Under the Towing Safety Management System (TSMS) option, routine inspections of towing vessels will primarily be performed by third-party organizations (TPOs), including certain classification societies, and this rule creates a framework for oversight and audits of such TPOs by the Coast Guard. The TSMS will provide those operators with the flexibility to tailor their safety management system to their own needs, while still ensuring an overall level of safety acceptable to the Coast Guard. Alternatively, under the Coast Guard

inspection option, routine inspections would be conducted by the Coast Guard, providing an option for those operators who choose not to develop and implement their own TSMS.

The rule also creates many new requirements for design, construction, equipment, and operation of towing vessels. Those requirements are typically based on industry consensus standards or existing Coast Guard requirements for similar vessels. To develop these requirements for towing vessels, the Coast Guard started by publishing a notice in 2004 (69 FR 78471) that asked questions and announced public meetings to seek guidance in implementing the 2004 Act provisions. We also worked with the Towing Safety Advisory Committee (TSAC), industry groups, and a contractor (ABSG Consulting--tasked with providing an industry analysis) to better gauge how to proceed with this rulemaking. We evaluated existing requirements for towing vessels (contained primarily in 46 CFR part 27 and subchapter I) to determine whether they were adequate for towing vessels and meet the intent of the 2004 Act. As discussed in greater detail below, the safety requirements in this final rule align with industry consensus standards, and we consider it very likely that most towing vessels already comply with most of them.



We made several changes to our proposal in the NPRM. We have clarified the system for Coast Guard oversight and inspection of towing vessels that complements the TPO system the Coast Guard proposed. To address concerns about the cost impact of the rule, we have added "grandfathering" provisions to several requirements, so the requirements will not apply to existing vessels or vessels whose construction began before the effective date of the rule. We also reorganized several parts for greater clarity or to better align with the existing text of other parts of the CFR. Finally, as we noted in the NPRM (76 FR 49985), we still plan to promulgate a separate rulemaking for an annual inspection fee for towing vessels that will reflect the specific program costs associated with the TSMS and Coast Guard inspection options. Until then we are establishing the existing fee of \$1,030 in 46 CFR 2.10-101 for any inspected vessel not listed in Table 2.10-101 as the annual inspection fee for towing vessels subject to subchapter M. As reflected in 46 CFR 2.10-1(b), this fee would not be charged for a vessel being inspected for the initial issuance of a COI, but the fee would be charged annually starting a year later.

#### C. Costs and benefits

This rule will affect approximately 5,509 U.S. flag towing vessels engaged in pushing, pulling, or hauling alongside, and the 1,096 companies that own or operate them. Towing vessels not covered by this rule include towing vessels inspected under subchapter I, work boats, and recreational vessel towing vessels.

The estimate for total industry and net government costs is \$41.5 million annualized at a 7 percent discount rate over a 10-year period of analysis. The estimate for monetized benefits is \$46.4 million annualized at a 7 percent discount rate, based on the mitigation of risks from towing vessel accidents in terms of lives lost, injuries, oil spilled, and property damage.

Subtracting the annualized monetized costs from the annualized monetized benefits yields a net benefit of \$4.9 million. We also identified, but did not monetize, other benefits from reducing the risk of accidents that have secondary consequences of delays and congestions on waterways, highways, and railroads.

### III. Regulatory History

#### A. Statutory background

The Coast Guard and Maritime Transportation Act of 2004 (2004 Act), Public Law 108-293, 118 Stat. 1028 (Aug.

9, 2004), established new authorities for towing vessels as follows:

The 2004 Act added "towing vessels" as a class of vessels that are subject to safety inspections. See section 415 of the 2004 Act, which amended section 3301 of title 46 of the U.S.C. (46 U.S.C. 3301). The term "towing vessel" was already defined in 46 U.S.C. 2101, and the scope and standards of safety inspections are laid out in 46 U.S.C. 3305.

The 2004 Act also authorized the Secretary of Homeland Security to establish, by regulation, a safety management system appropriate for the characteristics, methods of operation, and nature of service of towing vessels.

See Section 415 of the 2004 Act, which amended 46 U.S.C. 3306(j).

#### B. Regulatory background

On December 30, 2004, the Coast Guard published a request for comments and notice of public meetings titled "Inspection of Towing Vessels" in the Federal Register (69 FR 78471). The notice asked seven questions regarding how the Coast Guard should move forward with the rulemaking to implement the statutory provisions from the 2004 Act, listed above in section III.A. "Statutory background." The Coast Guard then held four public meetings, one each in

Washington, DC; Oakland, CA; New Orleans, LA; and St. Louis, MO. In addition to the comments the Coast Guard received at the public meetings, there were 117 comments submitted to the docket, which can be found in docket USCG-2004-19977 at <http://www.regulations.gov>. The Coast Guard used the public input received to inform its development of the NPRM.

On August 11, 2011, the Coast Guard published an NPRM titled "Inspection of Towing Vessels" in the Federal Register (76 FR 49976). The Coast Guard then held four public meetings, one each in Newport News, VA; New Orleans, LA; St. Louis, MO; and Seattle, WA. The comment period was open until December 9, 2011. We received and considered a combined total of more than 3,000 comments from more than 265 written submissions and oral statements from 105 persons at public meetings.

#### IV. Discussion of Comments and Changes

##### A. General feedback on the NPRM

For clarity, the following discussion of comments is sorted by topic, which primarily corresponds to parts of the CFR as noted in the Table of Contents.

Parts 1 and 2 are in title 46 CFR subchapter A, part 15 is in subchapter B, part 199 is in subchapter W, and all other parts are in the newly created subchapter M. Where

changes in response to a comment led to changes outside the designated section or part, we have noted it in the text. Within each topic of the rule, comments have been addressed in order of the section they applied to. When public submissions addressed multiple sections of the proposed rule or it wasn't clear what specific sections they addressed, we responded to their comments in the section that seemed most appropriate. In addition, we have made numerous changes through the regulatory text that are entirely non-substantive and editorial in nature; for example, changing "chapter" to "Chapter" or "onboard" to "on board" in certain contexts to better conform to standard usage.

We received several comments in general support of the proposed inspection regime, design standards, and SMS requirements for towing vessels. Individuals and maritime companies felt that the proposed regulation would serve to improve the safety, security, and environmental protection of towing vessel operations.

We also received several comments from individuals and maritime companies that generally opposed the proposed regulation. Some commenters expressed concern that the elements of the proposed rule would impose added cost

burdens on business, which might lead to termination of positions.

The Coast Guard acknowledges these comments and concerns. However, we do not expect towing companies and businesses to eliminate positions or downsize as a result of this rulemaking. See the Regulatory Analysis for our discussion of this issue.

One comment agreed with the American Bureau of Shipping Group's (ABSG's) recommendation that a traditional, inspected vessel option be offered as an alternative for those companies that did not maintain documentation of policies and procedures, and for those smaller companies who would not be able to implement a SMS. As we noted in the NPRM (76 FR 49978), we contracted with ABSG Consulting in 2006 for assistance with gathering data and categorizing the vessels that make up the towing industry; see their report, which also contains recommendations, in the docket, USCG-2006-24412-0017.

We concur with the commenter and the cited ABSG recommendation. As an alternative to a TSMS, the proposed rule included the option of a Coast Guard inspection regime. We have kept both of these options in this final rule.

Citing an 80-page NPRM, more than 2,000 pages of supporting documentation, and a short comment period, one commenter requested an extension of the comment period so smaller operators can review how the proposed requirements would impact their businesses. The Coast Guard did not grant this request; we provided a 120-day comment period, which is longer than our standard 90-day comment period, and also held four public meetings in that time. We believe there was sufficient opportunity to comment on the NPRM.

#### B. Background and need for regulation

We received one comment noting that the 2010 Act no longer exempted towing vessels of less than 200 tons engaged in exploiting offshore minerals or oil from 46 U.S.C. 8904 and regulations promulgated under that authority, and therefore § 15.535(b) should be revised. See section 606 of that Act. We agree with the commenter that the exemption is no longer valid and so we adopted the commenter's requested amendment to § 15.535.

We received comments from several commenters who supported the work conducted by TSAC working groups. For NPRM discussion of work by these groups, see 76 FR 49978. Other commenters commended the Coast Guard's efforts in incorporating suggestions provided by TSAC. One commenter

explained that a quote in the preamble, regarding the devastating impact that a TSMS can have on smaller companies, was incorrectly attributed to the TSAC Economic Analysis Working Group.

The commenter, a trade association, went on to explain that according to the experience of its members, TSMSs have had a positive impact on the safety performance and success of many small companies.

As we have previously noted, we greatly appreciate TSAC's contributions to the development of the NPRM. The quote we attributed to the TSAC Economic Working Group regarding the devastating impact that a TSMS requirement can have on smaller companies was taken from an earlier version of the working group's report; the quote should have read "To conduct internal audits on a large fleet, this may mean hiring a full-time staff, including salary, training and travel costs. While large companies will spend more to implement and maintain a SMS, however, the costs to a small company may be more difficult to absorb." See page 4 of the TSAC Economic Analysis Working Group Report, Dec. 16, 2008, document USCG-2006-24412-0007 in the docket. We are not surprised by the statement that TSMSs have had a positive impact on the safety performance and success of safety operators; we included TSMS as an option



because we believe TSMSs will provide a positive impact on the safe operation of towing vessels. For data supporting this assessment, see the Regulatory Analysis for this final rule in the docket.

One commenter recommended that rather than writing a costly new set of regulations, the Coast Guard should give consideration to consolidating the rules already in place. The commenter recalled a voluntary program from a 2009 "United States Coast Guard Requirements for Uninspected Towing Vessels" document that issued stickers to vessels that had been reviewed for compliance with current regulations.

The Coast Guard established the voluntary Towing Vessel Bridging Program in 2009 to ease the transition of towing vessels going from a status of uninspected to inspected, and to ensure that both the Coast Guard and the towing vessel industry are informed and prepared to meet requirements coming from this Inspection of Towing Vessels rulemaking. As we noted in the NPRM, the Coast Guard considered existing regulations but decided the standards or regulations found in other vessel inspection subchapters were not appropriate and did not fulfill the intent of the 2004 Act. (76 FR 49987, Aug. 11, 2011.) The unique nature of the towing industry and towing operations warrants the

development of new standards and regulations that pertain exclusively to towing vessels. In addition to the TSMS, this final rule contains other towing vessel-specific provisions, including expansion of the use of TPOs as part of the Coast Guard's TSMS-based, towing vessel inspection for certification regime. The Towing Vessel Bridging Program is a transition program based on voluntary compliance; it is not a substitute for a comprehensive regulatory regime that addresses and enforces safety requirements for towing vessels that Congress envisioned when it added towing vessels to the list of vessels subject to inspection.

We received comments from individuals and maritime companies who disagreed with the need for the proposed regulations, either because lack of vessel regulations were not the cause of the problem or the proposed regulations were not risk-based. Three commenters noted that some casualties occur because of human error, not from a lack of regulation. One individual felt that the Mississippi River accident in 2008 was not a good example in support of additional regulation, because the accident was caused by irresponsible behavior of the pilot.

The Coast Guard recognizes that human error is the cause of some casualties and that no amount of regulations

will eliminate human error. To the extent we are able, however, we have attempted to adopt regulations that help ensure the safe operation of towing vessels, including some regulations intended to address factors related to human error. A fully functional safety management system, such as a TSMS, is continuously updated and evolving based on the non-conformities observed and the lessons learned as a result of reviewing incidents - including those related to human error. The TSMS option should help ensure that towing vessels are operated more safely and in full compliance with the TSMS and regulations in subchapter M. The Coast Guard inspection option may provide less frequent feedback to vessel operators and crew, but it too is intended to ensure compliance with regulations in subchapter M.

Two commenters, an individual and a towing company, felt that the regulations are not based on risk. A company asserted that a risk-based approach supported by towing vessel casualty data should be the main motivation behind the application and development of towing vessel safety regulation.

As reflected in discussions below regarding specific requirements, the Coast Guard has used a risk-based approach in this rulemaking. We have reviewed comments on

cost and other assumptions on which we based our proposed rule and have made changes when appropriate to ensure that this final rule is risk-based. For data supporting this assessment, see the Regulatory Analysis for the final rule.

One commenter indicated that the Coast Guard's Marine Safety Directorate has not sought to help working mariners. The commenter praised Congress for amending 46 U.S.C. 2114 to protect a seaman against discrimination if he or she testifies in a proceeding brought to enforce a maritime safety law or regulation, or engages in certain other actions involving the seaman's work, or participates in a safety investigation by the Department of Homeland Security or National Transportation Safety Board (NTSB). The commenter listed four areas where mariners' safety, health, and welfare, in the commenter's view, were largely unprotected: workplace safety on uninspected dry cargo barges, hearing protection and noise prevention, asbestos, and personal protective equipment. The same commenter urged Congress to transfer authority over workplace inspection, drafting safety regulations, and requiring proper maintenance of barges from the Occupational Safety and Health Administration (OSHA) to the Coast Guard. This commenter also recommended areas in which the NPRM should be revised to promote workplace safety and health

regulations, including training of Coast Guard inspectors in OSHA-workplace-safety regulations and the use of personal protective equipment.

The Coast Guard notes the commenter's concern; the commenter's specific suggested revisions to the regulations proposed in the NPRM are addressed below where we discuss 46 CFR part 140, Operations, which includes subparts on crew safety and safety and health, and other parts addressed by this commenter.

C. Organization, general course, and methods governing marine safety functions (Part 1)

In our NPRM, we did not propose to amend part 1, but in this final rule we added § 1.03-55 to address comments on the appeals process for a company whose certificate is rescinded. See section IV.H below. Our proposed § 136.180 pointed to 46 CFR 1.03 for those seeking to appeal, but we saw the need to identify the Coast Guard official or entity that appeals should be directed to, including the appeal of matters relating to action of a third party, such as when a TPO rescinds a TSMS certificate.

D. User fees and inspection table (Part 2)

Part 2 of 46 CFR is in subchapter A. We received two comments regarding user fees. An association asked the Coast Guard to clarify whether those choosing both the TSMS

and the Coast Guard inspection options will have to pay whatever user fee is assessed in the final rule to recover the costs of the entire new towing vessel inspection program. Another commenter asserted that charging user fees to finance the implementation of regulation that is not risk-based will return little value to the industry.

Under 46 U.S.C. 2110 and the Coast Guard's regulations in 46 CFR subpart 2.10, the Coast Guard is required to charge a fee for services provided for vessels required to have a Certificate of Inspection (COI). Subpart 2.10 fees, however, do not apply to the initial issuance of a COI.

This fee for services must meet the criteria of 31 U.S.C. 9701 (Fees and charges for Government services and things of value) to be fair and based on the cost to the government, the value of the service being provided, the public policy served, and other relevant facts. The Office of Management and Budget (OMB) Revised Circular A-25 explains that full program costs should be recovered by fees charged.

In our NPRM, the Coast Guard stated its intent to establish a user fee, as required by law, for those vessels required to comply with subchapter M, and indicated that this user fee would be established through a separate rulemaking process that would commence on or around

publication of this final rule. The Coast Guard also committed to not inspecting towing vessels or issuing COIs to towing vessels until user fees were established. (76 FR 49985, August 11, 2011.)

We still plan to promulgate a separate rulemaking for an annual inspection fee specifically for towing vessels, under the authority in 46 U.S.C. 2110 and 31 U.S.C. 9701, that will consider the specific program costs associated with the TSMS and Coast Guard inspection options. However, until that time the Coast Guard is establishing the existing fee of \$1,030 stated in 46 CFR 2.10-101 as the annual inspection fee for towing vessels subject to subchapter M, for any inspected vessel not listed in Table 2.10-101. As reflected in 46 CFR 2.10-1(b), this annual inspection fee will not be charged for an initial COI inspection, but the fee will be charged annually starting a year later. Once this final rule becomes effective, the Coast Guard will apply the existing annual fee listed in 46 CFR 2.10-101, Table 2.10-101 as "Any inspected vessel not listed in this table" to subchapter M vessels other than those already separately listed in the Table. Since all vessels subject to subchapter M will be considered inspected vessels and required to obtain COIs, regardless of whether the TSMS option is chosen, all subchapter M

vessels receiving COIs will be charged an annual inspection fee as outlined above.

User fees charged by the Coast Guard under 46 U.S.C. 2110 do not directly finance Coast Guard operations and thus user fees do not finance the implementation of the regulations. OMB's Revised Circular A-25 explains that user fees are intended to offset the cost of providing services to specific beneficiaries.

Regarding the comment about the lack of value of a user fee to finance the implementation of a non-risk-based regulation, we have used a risk-based approach in developing this rulemaking and have made changes from the proposed rule taking into account commenters concerns to ensure that this final rule continues to rely on risk-based analysis.

#### Other certification changes

In the NPRM we stated we would amend the table in subchapter I - and in other subchapters - that identified inspection and certification regulations applicable to vessels. Our intended amendments to those tables were to reflect changes for towing vessels introduced by subchapter M (see discussion in 76 FR 49979, August 11, 2011). Since the NPRM was published, however, in a separate rulemaking (79 FR 58270, 58272, September 29, 2014) the Coast Guard



removed tables in 46 CFR 24.05-1, 70.05-1, 90.05-1, and 188.05-1. Those tables replicated a table in 46 CFR part 2 dedicated to inspection regulations and thus were not necessary.

Rather than add to the 7-column, 7-page table in 46 CFR 2.01-7(a), we have amended the text before and after the table instead. These amendments direct towing vessels to a new paragraph (b), which directs those subject to this rule to subchapter M for inspection and certification regulations, and other towing vessels to Table 2.01-7(a).

#### E. Manning (Part 15)

We received approximately 40 comments that addressed the issue of manning. Part 15 of 46 CFR is in subchapter B.

We received several comments stating that the Coast Guard should require minimum crew manning levels. One commenter said wheelhouse manning is a concern due to the shortage of qualified individuals holding the appropriate merchant mariner credential, especially with the retirement age approaching for many currently qualified individuals. A maritime company said the minimum manning level should be included in the COI. Another commenter noted in response to COI requirements proposed in part 136 that this regulation should clarify the number of required

crewmembers and allow the towing vessel to be operated by a single crewmember in certain circumstances.

In accordance with 46 CFR 15.501, the Coast Guard will specify the minimum manning for each towing vessel in all of the vessel's areas of operation on the vessel's COI, including international and domestic operations. We note that Officers in Charge, Marine Inspection (OCMIs) will review operational details of the vessel and work with companies to make decisions on vessel manning which could indicate various levels of manning based on specific routes and service of the towing vessel when determining the number of required crewmembers for a towing vessel. We do not envision an appreciable increase in the number of qualified individuals needed to man inspected towing vessels. The influence of market forces on the number of individuals seeking to become credentialed operators is beyond the scope of this rulemaking.

Several commenters opposed any change to the current manning levels required for towing vessels, and some commenters recommended specific changes to several sections currently in the CFR, such as 33 CFR 155.710(e) and 46 CFR 15.810(b) and 15.820(a)(3), to avoid inadvertent changes to the manning or credentialing requirements given the Coast Guard's statement in the NPRM that "we are not proposing to

change any of the current manning levels required for towing vessels" (76 FR 49990, Aug. 11, 2011).

As previously stated, the Coast Guard will make a vessel-specific assessment of the manning required for a given vessel's operations. The minimum manning required for safe operations may differ from one operation to another. As with other inspected vessels, this is a vessel-specific determination made by the cognizant OCMI.

The Coast Guard believes the requested change to § 15.820(a)(3) is already addressed through existing regulations. For inspected vessels 300 gross tons and above that operate on inland waters, 46 CFR 15.820(a)(3) requires the vessel to have an individual with a license or the appropriate merchant mariner credential (MMC) officer endorsement if the OCMI determines that such credentials are necessary for the person responsible for the vessel's mechanical propulsion. For purposes of towing vessels, however, the applicable subchapter B definition of "inland waters" excludes the Western Rivers. See 46 CFR 10.107. Therefore, § 15.820(a)(3) does not apply to a towing vessel when it is operating on Western Rivers, a term also defined in § 10.107. Based on a recent survey of the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE) database, we have concluded that most inland towing vessels

300 gross tons or above operate on the Western Rivers. Those towing vessels operating on inland waters beyond the Western Rivers may be required to have a credentialed individual responsible for the vessel's mechanical propulsion based on a vessel-specific assessment conducted by the cognizant OCMI.

The Coast Guard believes changes to 33 CFR 155.710(e) that would allow the use of a letter-of-designation for an inspected towing vessel are not warranted. The requirements of 33 CFR 155.710(e)(1) apply to all inspected vessels required by 46 CFR chapter I to have an officer aboard, including towing vessels that become inspected vessels under this rule. Congress made towing vessels a class of vessels subject to inspection, and we have no evidence that towing vessels are less likely to spill oil than the other inspected vessels already subject to § 155.710(e)(1). We also see value in uniform requirements for inspected vessels conducting the same activities. We note, however, that existing § 155.130 provides for exemptions from compliance with the requirement if authorized by the COTP or OCMI for reasons such as economic or physical impracticality. We therefore believe that adequate flexibility already exists in Part 155 to

accommodate any unexpected consequences of towing vessels becoming subject § 155.710(e)(1).

The Coast Guard believes changes to 46 CFR 15.810(b), in order to exempt towing vessels subject to subchapter M from the requirements for a minimum number of mariners holding a license or MMC officer endorsement as mate required to be carried on certain inspected vessels, are not warranted. Towing vessels are one of the several classes of vessels that are authorized to use a two-watch system and, as a result, additional mates are unnecessary to comply with this level of manning.

Some commenters urged the Coast Guard to adopt TSAC's 2006 recommendations to amend proposed 46 CFR 15.535 to incorporate a baseline requirement for a safe watch complement. This was intended to avoid confusion about the minimum manning that will be required on towing vessel COIs and the role of the TSMS in crewing decisions.

Consistent with our NPRM preamble statement that we were not proposing to change any of the current manning levels required for towing vessels, we modeled our proposed § 15.535 after § 15.610, which addresses towing vessel master and mate (pilot) requirements on uninspected vessels. But as noted above in section IV.B, we made a change in § 15.535 from what we proposed in the NPRM. To

reflect the 2010 Act's amendment to 46 U.S.C. 8905, we made a conforming amendment to § 15.535(b) to remove an non-applicability reference to certain towing vessels of less than 200 gross register tons engaged in exploiting offshore minerals or oil. While reviewing proposed § 15.535 in response to a comment discussed above, we noted the need to remove a reference to vessels engaged in assistance towing because the applicability of § 15.535 does not include vessels engaged in assistance towing. Further, we revised paragraph (a) to more clearly state which vessels are subject to § 15.535, to specify the vessels not subject to subchapter M that must meet requirements § 15.535(b), and to note that all towing vessels subject to § 15.535 must also meet requirements in § 15.535(c). Finally, we inserted clarifying edits and paragraph headings in § 15.535 to make it easier to read and understand, and in both §§ 15.535 and 15.610 we clarified that the officer in charge of the vessel must provide the evidence to the Coast Guard.

Also, we made changes to § 15.535 to ensure consistency in the nomenclature introduced by the Consolidation of Merchant Mariner Qualification Credentials final rule (74 FR 11196, Mar. 16, 2009), and to § 15.610 to ensure that this section refers to the remaining

uninspected towing vessels. Our changes also reflect the recent amendments made by the final rule entitled Implementation of the Amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, and Changes to Domestic Endorsements (STCW) (78 FR 77796, Dec. 24, 2013).

As the authority issuing the vessel's COI, the cognizant OCMI is required by law to stipulate the manning for an inspected vessel. See 46 U.S.C. 3309 and 8101, 33 CFR 1.01-20, and 46 CFR 2.01-5 and 15.501. She or he can take a variety of factors into consideration when determining the safe manning for a vessel, including recommendations from the owner or managing operator. In some cases, existing law or regulations specify the minimum manning for a particular voyage, area of operation, or vessel service. See e.g., 46 U.S.C. 8301 and 46 CFR 15.610. In this final rule, 46 CFR 15.535 would set one such minimum. An OCMI may specify a level of manning above those minimums specified by law if such a level is warranted to safely operate the vessel. See 46 U.S.C. 8301(d)(2) and 46 CFR 15.501. A vessel's safety management system can identify situations where additional manning may be warranted (such as high water conditions) but it cannot

specify a level of manning below the minimum established by the OCMI at any time.

We received some comments stating that the language used in § 15.535(c) concerning towing vessels in pilotage waters on the Lower Mississippi River is not clear. One commenter said it would be useful to define the geographical limits of the "pilotage waters of the Lower Mississippi River" in § 15.535(c). Another commenter said the language should be the same as that used in § 15.610(b).

The Coast Guard agrees with these comments and has changed the text in § 15.535(c) to match the current text of § 15.610(b), except for necessary organizational changes and to specify that the evidence should be provided to the Coast Guard. The pilotage waters of the Lower Mississippi River are described in a notice of designated areas published December 26, 1996 (61 FR 68090).

Some commenters said crew size should be dictated by the size and needs of the vessel. One commenter said the vessel master must have the final say on the crew requirements. A towing company said it is important that the minimum manning requirements account for different vessel operations (e.g., crew of three for ship assist work in-harbor versus crew of six for offshore trips).



While the master has a role in ensuring the proper manning of a vessel, the master must observe applicable law and regulations, and the manning specified by the Coast Guard on the vessel's COI when performing that role. We note that under § 140.210, the master must ensure that adequate corrective action is taken when he or she encounters unsafe conditions. The COI issued by the Coast Guard will specify the minimum manning for the vessel under normal operating conditions and the master must adhere to the provisions of the COI. See § 140.210(a)(1). The towing vessel master and the TSMS should identify when, and if, additional personnel are needed on board the towing vessel. During flood or low water conditions, for example, the master may specify that additional crew members are needed.

We received some comments requesting that the Coast Guard clarify and resolve differences in language between § 15.535 and language in the STCW Supplemental NPRM that proposed to amend § 15.610.

As noted above, the STCW final rule has been published, and we have amended the text in § 15.535(c) to match the current § 15.610(b). There was a slight variation in wording between § 15.535(c) as originally proposed and § 15.610(b).

Further, our proposed § 15.535(c) specified that the towing vessel "be under the control of an officer who holds a first class pilot's license or endorsement for that route, or who meets" requirements related to the type of barge being towed. The current § 15.610(b) specifies that the towing vessel be under the control of an officer meeting that section's requirements for a towing vessel of 26 feet or more in length and that that officer hold "a first-class pilot's endorsement for that route or MMC officer endorsement for the Western Rivers, or" that the officer meets the requirements for a towing vessel of 26 feet or more in length and the requirements based on the type of barge being towed. Consistent with the commenters' recommendations, we have amended § 15.535 to conform to the current version of § 15.610.

Also, because we added § 15.535 to address vessels subject to subchapter M, we inserted a paragraph at the beginning of § 15.610 to limit that section to towing vessels not subject to subchapter M. Applicability exceptions in subchapter M explain that some towing vessels at least 8 meters in length will still be subject to § 15.610. We made necessary organizational changes to § 15.610 to reflect our insertion of this new paragraph.

An individual recommended that in addition to the towing vessel being operated by a properly licensed master, our rule should require at least one crew member to be documented with preferably an "Able Bodied" seaman's rating. The commenter noted his marine work experience and seeing members of a construction crew assigned to handle the lines when a towing evolution was needed. He stated that the skills and knowledge of construction workers do not always overlap with those required of seamen.

We did not propose the change suggested by this commenter and would want to receive comments before making the suggested change. But we are confident that the manning requirements in § 15.535 and requirements in § 140.210 for reporting and addressing unsafe conditions provide assurances that lines will be properly handled during towing evolutions. We have not made a change from the proposed rule based on this comment.

We received one comment saying that our rulemaking seeks to address issues such as a "man overboard" situation, but such situations are innately linked to minimum safe manning of a vessel. The commenter asked how a licensed towing officer at the helm is expected to safely and successfully recover a single deckhand from the water should the deckhand go overboard during routine operations.

We have addressed requirements for lifesaving equipment, arrangements, systems, and procedures on towing vessels in Section IV.K of this preamble, "Lifesaving," and lifesaving regulations are located in part 141 of subchapter M. When specifying the minimum complement of officers and crew necessary for the safe operation of the vessel, the OCMI is called on to consider emergency situations such as a person overboard. See 46 CFR 15.501.

One commenter pointed out that language used in § 15.535 in the NPRM regarding an exception for certain towing vessels was eliminated by section 606 of the 2010 Act.

As noted above in response to a comment addressed in section IV.B, section 606 of Public Law 111-281 did strike the paragraph in 46 U.S.C. 8905 that exempted vessels of less than 200 gross tons "engaged in the offshore mineral and oil industry if the vessel has offshore mineral and oil industry sites or equipment as its ultimate destination or place of departure" from 46 U.S.C. 8904 requirements and regulations promulgated under 46 U.S.C. 8904. This statutory change was not reflected in our proposed rule. Accordingly, we made a conforming amendment to § 15.535(b), which excludes certain vessels from the licensed-master-or-mate requirement, by deleting the reference to vessels

engaged in the offshore mineral and oil industry. This amendment to § 15.535(b), which now only exempts vessels engaged in assistance towing from the licensed-master-or-mate requirement, conforms this final rule to Public Law 111-281's amendment to 46 U.S.C. 8905.

One commenter expressed concern about the words "not to include over time" in the definition of "day" in existing 46 CFR 10.107 and that section's computation of service hours on vessels less than 100 gross register tons (GRT). The commenter stated that work-hour abuses occur, especially on vessels of less than 100 GRT, because a day of work is considered 8 hours. Also, overtime is not counted toward sea service. The commenter recommends that this loophole be removed.

In the proposed regulatory text of the NPRM, we did touch on 46 CFR chapter I, subchapter B, Merchant Marine Officers and Seamen, but we did not propose any changes to 46 CFR part 10, Merchant Mariner Credential, where 46 CFR 10.107 is located. Related to this comment, we note that Section 607 of the 2010 Act, which amended 46 U.S.C. by introducing additional logbook and entry requirements in 46 U.S.C. 11304, included entries for the "number of hours in service to the vessels of each seaman and each officer." We would need a separate rulemaking to fully implement

section 607 of the 2010 Act, which involves hours of service; that rulemaking could apply to more than just towing vessels.

We amended a regulation, 46 CFR 15.815(c), that requires a radar observer endorsement for masters or mates onboard an uninspected towing vessel 26 feet or longer by removing the word "uninspected." When that regulation was issued, most towing vessels were uninspected, and § 15.815(a) covered towing vessels 300 GRT or more that were inspected. Because most towing vessels 26 feet or longer will become inspected once this rule becomes effective, we are making this conforming amendment to 46 CFR 15.815(c). This change is consistent with our § 15.815 towing-vessel specific enabling statute, 46 U.S.C. 8904(a), which distinguishes towing vessels purely on length, not whether they are inspected or uninspected. Because § 15.815(c) already requires this radar observers' endorsement on uninspected towing vessels, there is no anticipated cost associated with this change.

F. Certification/Definitions/Applicability (Part 136)  
Applicability

We received some comments supporting the Coast Guard's decision to defer consideration to a subsequent rulemaking

of requirements for towing vessels less than 26 feet in length, towing vessels used solely for assistance towing, and work boats operating exclusively within a work site and performing intermittent towing within a work site. Several commenters expressed support for the concept of excepted vessels but felt that clarification is needed with regard to the range of fleet and harbor service operations that fall under this term. Others suggested that some aspects of the equipment requirements, like distress flares and additional lifebuoys, could be removed from the rule.

In our definition of "excepted vessel" in § 136.110, we make reference to harbor-assist, but we define that term in addition to "limited geographic area" and we believe those definitions are sufficiently clear to identify the range of harbor service operations that fall under these terms. We had included a reference to a fleeting area as an example of a limited geographic area in our proposed definition of "excepted vessel," but, as discussed below in this section (IV.F), we removed that and other examples for the separately defined term "limited geographic area." Also, we amended the reference to vessels that may be included by the cognizant OCMI in this definition by identifying the requirements and reasons the OCMI must

consider before treating a vessel as an excepted vessel for purposes of some or all of the requirements listed.

The Coast Guard has not subjected excepted vessels to certain requirements in part 142 for fire protection equipment, and certain requirements for new vessels in part 143 for alarms and monitoring, general alarms, communication, fuel shutoff, additional fuel system requirements for existing vessels, and electrical power sources, generators, and motors, and electrical overcurrent protection. We have considered a commenter's request to also not require excepted vessels to comply with distress flare and additional lifebuoy requirements but decline to do so because the factors used to except these vessels do not reduce the need for flare and lifebuoy requirements.

In § 141.375, we have a more precise exception regarding distress flares and do not require that they be carried on vessels operating in a limited geographic area on a short run limited to approximately 30 minutes away from the dock. Also, we have reviewed our lifebuoy requirements in § 141.360 based on the request to not require additional lifebuoys of excepted vessels, but have not adopted this suggested change because some excepted vessels, for example, towing vessels used for response to an emergency, need to have on board the lifebuoys required



under § 141.360. Also, we noted our use of the term "excepted towing vessel," instead of "excepted vessel," in part 143. We have clarified part 143 by making all proposed references to "excepted towing vessel," consistent with the term we defined, "excepted vessel."

Some commenters did not agree with our exception of towing vessels less than 26 feet for several reasons, including smaller vessels being given an unfair competitive advantage, the fact that such vessels may be engaging in commercial work, and a concern about regulatory avoidance.

Our exemption for towing vessels less than 26 feet in length is intended to provide for an incremental application of inspection status to the towing vessel fleet and is consistent with the recommendations of TSAC. We note here that we made edits in § 136.105 to ensure that the exemptions in that section are clearly stated. Specifically regarding our meter approximation of 26 feet, we changed "(8 meters)" to the more precise approximation of "(7.92 meters)." Also we corrected the threshold for vessels subject to subchapter I.

An individual noted that towing vessels should be measured end-to-end at actual length, and another commenter suggested that the size of tow should be used to determine exempt vessels. Another individual recommended that the

exemption should be based on a combination of length, displacement, and shaft horsepower in order to remove the incentive to use short, high-power tugs to circumvent Coast Guard inspections. A commenter suggested a clarification that towing vessels less than 26 feet in length are not exempt if they move barges carrying oil.

For methods of measuring towing vessels, the Coast Guard sees no reason to deviate from the statutory standard in 46 U.S.C. 8904(a) which is reflected in 46 CFR 15.535 and 136.105: length measured from end to end over the deck (excluding the sheer). We considered the suggestion of using size of tow or a combination of length, displacement, and shaft horsepower as a way to determine applicability, but we believe using the length of the towing vessels is a more manageable approach which - while not as direct - provides a measure of risk control.

We agree that a change from the proposed rule is necessary to clarify that vessels less than 26 feet are not exempt from the requirements of this rulemaking when towing a barge carrying oil. In proposed § 136.105, when identifying exceptions to applicability, we made clear that towing vessels less than 26 feet that push, pull, or haul a "barge that is carrying dangerous or hazardous material" would not be excluded from subchapter M applicability. In

the NPRM, we did not define the term "dangerous or hazardous material" but in the preamble we did describe our limitation on the less-than-26-feet exemption by stating this rule does not apply to towing vessels less than 26 feet in length "unless towing a barge carrying oil or other dangerous or combustible cargo in bulk." To make this intent clear in the regulatory text of the final rule, we have adopted the defined term "oil or hazardous material in bulk," to replace the term "dangerous or hazardous material" in § 136.105(a).

Also, to clarify that only one form of hazardous material needs be carried to trigger applicability, we changed "materials" to the singular, "material," throughout the final rule. Also, we amended the definition of "oil or hazardous material in bulk" by inserting "to carry cargoes" in its reference to being certified under subchapters D or O to better reflect the nature of the certifications.

Other companies supported the less-than-26-foot exception. One commenter acknowledged that the Coast Guard could address smaller towing vessels in a future rulemaking. An individual thought the exception should apply to even longer vessels (up to 32 or 40 feet in length) because such vessels are too small to do any serious towing, and a company agreed and stated that all

its shipyard and harbor service vessels were 34 feet or longer.

As noted above, the Coast Guard approach in transitioning the uninspected towing vessel fleet into an inspected status is to do so incrementally over time. Based on our analysis of risk and a specific recommendation provided by TSAC<sup>1</sup>, we proposed that subchapter M apply to vessels 26 feet and above. This length standard has been used in various statutes to establish requirements for radiotelephones, automatic identification systems, electronic charts, and manning for towing vessels. See 33 U.S.C. 1203 and 1223a, and 46 U.S.C. 8904 and 70114. We find no perfect length for measuring risk, but we believe 26 feet is the best breakpoint to use at this time in our transitioning of the uninspected towing vessel fleet into an inspected fleet.

We received one comment supporting the exception for workboats that do not engage in commercial towing for hire but perform intermittent towing within a worksite. A contracting company agreed that increased equipment requirements are not needed for job site boats. Two individuals suggested that the exception should be

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<sup>1</sup> "Report of the Working Group on Towing Vessel Inspection," p. 6, submitted to TSAC on September 29, 2005.

simplified, such as by including a mileage limitation. A company recommended a slight expansion of the exception to cover workboats going to or from the worksite.

The Coast Guard disagrees with the recommendation to include a mileage limitation or expand the exception, and believes the terms "worksite" and "workboat" are adequately defined in § 136.110. The OCMI will make determinations of the boundaries and limitations of worksites within the OCMI's zone. The OCMI will evaluate the unique operating conditions and hazards of the area and determine the risks and mitigating factors necessary to support such operations.

A commenter requested that we treat workboats engaged in oil spill response activities as exempt, just as we exempt workboats operating in a worksite.

The Coast Guard has already included an exception for towing vessels engaged in emergency or pollution response in our definition of "excepted vessels" in § 136.110. We do not intend to provide a general exemption to oil spill response vessels from these rules. Instead, the OCMI may designate a pollution response area as a worksite which would afford a towing vessel the opportunity to be exempt from subchapter M while it is operating exclusively in the

worksite if it qualifies as a workboat under § 136.105(a) (3).

This is consistent with the Coast Guard's intent to provide inspection standards to certain vessels based on risk and consistent with the recommendations of TSAC. This rule exempts certain types of vessels from subchapter M, and relieves other types of vessels, excepted vessels, from certain equipment requirements due to the nature of their service. We have made no changes from the proposed rule based on this comment.

Two commenters suggested adding language to our worksite exception in § 136.105(a) (3) to include "maneuvering a tank barge on and off of a drydock or cleaning dock" to the "intermittent towing" covered in the worksite; and others recommended that we amend our "excepted vessel" definition in § 136.110 to include moving vessels on and off drydocks and to and from cleaning docks, or shifting vessels within a limited geographic area, or including a full range of activities commonly performed by towing vessels in a limited geographic area.

The Coast Guard sees no need for these recommended changes. Our workboat exception in § 136.105(a) (3) covers the activity the commenter requests we add. Also, our definition of "excepted vessel" in § 136.110 includes

towing vessels operating "within a limited geographic area." Excepted vessels could include towing vessels moving vessels on and off drydocks and to and from cleaning docks. But we have left this determination to the discretion of the cognizant OCMI, to be made on a case-by-case basis.

We received a very large number of comments, particularly from commenters in the American Waterways Operators (AWO) Responsible Carrier Program (RCP), that expressed the belief that the TSMS should be required for all towing companies and should not be optional. Proponents argued that the TSMS is flexible and scalable, would create consistency, and addresses human error, the leading cause of towing vessel accidents. Some of the commenters favored having a third-party audit option and conservation of Coast Guard resources. A maritime company stated that the savings accruing from a robust TSMS will far outweigh any associated cost of development and implementation. One company observed that a TSMS gives a company the ability to adjust its system through lessons learned and continuous improvement, rather than complying with a set of standards once a year. Commenters stated that the Coast Guard should not make the TSMS optional because of concern about costs; instead the Coast Guard

should eliminate requirements that are not justified by risk analysis. One commenter warned, however, that a TSMS is not a substitute for an inspection.

We received many other comments that supported retaining the option of inspection by the Coast Guard. Proponents favored the flexibility provided by having the option, the reduced administrative burden of the Coast Guard inspection, cost efficiency for small businesses, and the fact that the Coast Guard already has a successful inspection program. An association has favored a traditional Coast Guard inspection program for the towing industry. An individual noted that small companies cannot afford to create and implement a TSMS and would depend on the Coast Guard to provide yearly inspections and guidance. Other individuals and a State government recommended that the Coast Guard should develop a model TSMS that would be easy for small companies to adopt. Another individual opposed having optional provisions in a regulation. A commenter pointed out that current form CG-3752, Application for Inspection of U.S. Vessel, should be revised to add a block for indicating which option is being used for the towing vessel.

As we noted in the NPRM (76 FR 49979), the NTSB and TSAC have strongly supported a TSMS, and the approach is



supported by the International Safety Management (ISM) Code. The NTSB disagreed with our applicability exception for seagoing towing vessels of 300 gross tons or more subject to the provisions of subchapter I because currently under 33 CFR part 96 only vessels measuring more than 500 gross tons and operating on international voyages are required to have SMS and the subchapter M regulation does not apply to the 22 seagoing towing vessels of 300 gross tons or more already inspected in accordance with regulations for cargo and miscellaneous vessels in 46 CFR subchapter I. The NTSB encouraged the Coast Guard to extend the SMS requirement to these seagoing vessels by requiring SMS on all seagoing towing vessels of 300 gross tons or more.

The Coast Guard believes the traditional annual inspection regime we offer as an option to all towing vessels subject to subchapter M will provide necessary measures to ensure compliance with subchapter M requirements and enable us to detect non-compliance.

The Coast Guard notes the NTSB concerns and acknowledges that not all seagoing towing vessels subject to subchapter I are required to comply with SMS requirements in 33 CFR part 96, subpart B, for vessels on international voyages. That applicability threshold of the

500 gross tons reflects an international standard from the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS) for vessels subject to Chapter IX of SOLAS, Management of the Safe Operation of Ships. In general, the Coast Guard supports all towing vessels being subject to a robust and well-functioning safety management system. Should the Coast Guard decide to extend SMS requirements to all vessels subject to subchapter M, or to seagoing towing vessels of 300 gross tons or more that are subject to subchapter I, we would proceed with a separate rulemaking. We would look at accident data after this rule becomes effective before proposing such a rule.

We are considering the suggestion that we amend form CG-3752, Application for Inspection of U.S. Vessel, to add a block to indicate which option the towing vessel owner or managing operator is using. For now, we recommend using the "Other (Indicate)" box - e.g., "Towing Vessel (TSMS option)" or "Towing Vessel (CG Inspection option)."

We received some comments from towing or dredging companies suggesting exemption from the entire rule for certain vessels, such as all existing vessels, vessels under 79 feet, vessels under 200 gross tons, or vessels operating on inland and harbor routes. One company argued that construction/dredge tugs on the Great Lakes should be

considered for exceptions. Another company requested an exception for vessels that work as towing vessels less than 10 percent of the year. A small company with an 18-foot tow vessel and a 33-foot barge that carries less than 10,000 gallons of diesel requested an exception. Some commenters suggested that vessels used to move passenger barges should be specifically excluded. One company recommended that a committee should be formed to examine which regulatory provisions are appropriate for particular vessels.

The Coast Guard does not believe that broad exemptions from the requirement of these rules would serve the intended goal of improving safety in the towing vessel industry. The Coast Guard seeks a balance between a tiered implementation of towing vessel safety rules to vessels with the greatest risk and a prudent exemption of applicability to towing vessels with less potential risk to life, property and the environment.

One commenter suggested exemptions for towing vessels operating on inland and harbor routes not engaged in transporting petroleum products. In particular, they argued that the TSMS and towing vessel record (TVR) requirements should only apply to vessels that tow oil and hazardous material, or are over 79 feet and 2,000 HP.

The Coast Guard disagrees. As we note in our earlier discussion of part 136 comments, the Coast Guard does not intend to create exemptions for all types of inland towing operations, or to provide exemptions for particular areas without cause. We note, however, that under § 136.230 the OCMI may consider route-specific requirements of subchapter M when designating a permitted route.

Regarding the TSMS requirement, it is optional. In this final rule, the only vessels required to maintain a TSMS are those that choose the TSMS option. A TSMS, however, may benefit every type of towing vessel regardless of its service routes, vessel length, or vessel horsepower. For more details on this, see the discussion in section IV.B and the RA for the final rule (in the docket). As for the TVR requirement, the vessel owner or managing operator has the option of maintaining it electronically or on paper, and for towing vessels with a TSMS, the required records may be maintained in another record specified by the TSMS. It is essential for maritime safety that data we require in § 140.915 be recorded. We discuss the TVR requirement, and the various forms it may take, in more detail in our discussion of part 140 comments.

We received one comment that favored applying the rule to vessels towing oil and providing harbor assist to large

ships, applying a less costly system to other vessels, and clarifying exemptions. Many commenters agreed that rules designed for offshore or ocean routes or large rivers were not appropriate for vessels in canals, harbors, or shallow rivers. The commenters opposed a one size fits all approach, and noted that Congress intended different standards for various types of towing vessels. One of the commenters favored grandfathering existing vessels into compliance for as many of the requirements as practicable. Another commenter, however, noted that risks are similar for inland and harbor towing as for coastwise or ocean towing, and solutions, such as planning and testing, should be similar. A towing company opposed having more stringent rules for tank barge operators than for companies that haul dry cargo barges.

The Coast Guard agrees that there are different characteristics, methods of operation, and nature of service of towing vessels that require unique application of requirements. The Coast Guard believes that the utilization of a TSMS allows the operator to tailor safety processes to the unique conditions in which the vessel and company operate. A TSMS is scalable, dynamic, and customized by the operator for the unique risks, challenges, and operating environments anticipated. Some

hazards are universal to all vessels regardless of where they operate. Therefore, the Coast Guard believes that certain minimum standards are necessary to mitigate these risks and seeks to apply them to all towing vessels subject to this rule. The additional variations necessitated by the type and area of operation can be accommodated by a TSMS.

An association questioned whether "Lugger Tugs," towing vessels that carry cargo, would be inspected as towing vessels or as offshore supply vessels. One individual urged the Coast Guard to ensure consistency in regulatory enforcement and fairness for all vessels.

The Coast Guard notes that towing vessels that carry cargo for hire, or conduct other regulated activities - such as carrying passengers for hire, would likely be subject to regulations contained in other subchapters. Vessels engaged in two (or more) separate regulated activities are referred to as being in "dual (or multiple) service." Towing vessels that want to conduct activities other than just towing need to seek approval from the OCMI issuing the COI. The Coast Guard provides guidance to all OCMIIs to help ensure consistency in regulatory enforcement and fairness for all vessels. In the example of a towing vessel carrying cargo, that vessel meets the definition for

two vessel types and would have to meet additional requirements to carry cargo on the towing vessel. Numerous parameters, including vessel characteristics and the operations conducted by the vessel, would determine under which vessel type the vessel would be inspected.

For clarification, we amended our description of "public vessel" in § 136.105 to match the term defined in 46 U.S.C. 2101. We also point to the 46 U.S.C. 2101 definition for the meaning of the term in §§ 2.01-7, 15.535, and 15.610 of this chapter.

#### Definitions

We received several hundred comments suggesting edits, deletions, or additions to our proposed definitions in § 136.110. The discussion of changes made to the individual terms is as follows:

#### "Accepted Safety Management System"

We deleted our proposed definition of "Accepted Safety Management System" because we did not propose to use the term within the regulatory text of the NPRM and do not use it in this final rule.

#### "Audit"

We received a suggested amendment of the first sentence in our definition of "audit" that would replace "planned arrangements" and "arrangements" with "TSMS." One

commenter suggested deleting the phrase "observing persons performing required tasks" in paragraph (1)(iii) of the proposed definition of "audit," because there is no definition for "required task."

The Coast Guard partially agrees with the first comment. Not all towing vessels will operate in accordance with a TSMS. Under § 138.225, some vessels may meet TSMS requirements by complying with ISM Code requirements of 33 CFR part 96 or some other SMS that the Coast Guard has accepted and deemed to meet subchapter M TSMS requirements. Rather than adopting the suggested edit, we deleted "planned arrangements" in favor of "requirements" and have made clear what requirements we intend to be covered by our § 136.110 definition of "audit" by specifying "TSMS or other applicable SMS planned arrangements."

In response to the "required task" comment, the Coast Guard has edited the definition of "audit" in § 136.110 by replacing the term "required tasks" with "specific tasks within their assigned duties," in paragraph (1)(iii) and "specific tasks" with "their assigned duties" in paragraph (1)(ii). We used the term "duties" which is used in § 138.220(b)(2) to describe training for operational duties and duties associated with the execution of the TSMS.

"Authorized Classification Society"



We received a comment from a classification society requesting that the Coast Guard delegate the inspection of towing vessels to authorized classification societies. In response, as we discuss in more detail in our TPO preamble section (IV.I), we have amended § 139.110 to clarify the distinction between audits and surveys. For the purpose of audits, a recognized classification society meets the requirements of a TPO and may work as a third-party auditor. For the purpose of surveys, an authorized classification society meets the requirements of a TPO and may work as a third-party surveyor. Further, we have amended § 144.140 to include certain authorized classification societies as being qualified to conduct a verification of compliance with design standards. Therefore, we have incorporated the part 8 definition of "authorized classification society" into this final rule. "Buoyant apparatus" or "Inflatable buoyant apparatus"

We received five comments, primarily from maritime companies and professional associations, suggesting the addition of a definition for the terms "buoyant apparatus" and "inflatable buoyant apparatus" because the terms are not defined in the proposed part 141. One maritime company suggested the following text for the definition of "buoyant apparatus": "Buoyant apparatus is flotation equipment

(other than lifeboats, life rafts, and personal flotation devices) designed to support a specified number of persons in the water, and of such construction that it retains its shape and properties and requires no adjustment or preparation for use." The same commenter offered the following text for the definition of "inflatable buoyant apparatus": "Inflatable buoyant apparatus is flotation equipment that depends on inflated compartments for buoyancy and is designed to support a specified number of persons completely out of the water."

The Coast Guard does not agree that it is necessary to include definitions for commonly understood lifesaving apparatus in subchapter M. These terms are already defined in 46 CFR, part 160—Lifesaving Equipment, in § 160.010-2. We did not make any changes from the proposed rule based on these comments.

#### "Class II piping systems"

We deleted this definition as this term is no longer used within this subchapter.

#### "Cold water"

A maritime trade association had no objection to the proposed definition of "cold water," and understood its application in Table 141.305 regarding survival craft; however, the commenter was unaware of any deficiency in the

survival craft currently in use and requested that only a single standard apply to the Great Lakes.

The Coast Guard notes that the definition of cold water is consistent with other regulations and existing Coast Guard policy (NVIC 7-91) lists the areas designated as cold water. While the Great Lakes are generally considered cold water, several lakes are not designated as cold water during certain months of the year. The Coast Guard believes that specifying all of the Great Lakes as all cold water, year round, would impose an unnecessary burden on those towing vessels which operate seasonally when certain lakes are not designated as cold water. However, this does not prevent a vessel owner or managing operator from voluntarily carrying the equipment required on cold water at all times.

#### "Consideration"

We deleted this term as the proposed definition was identical to 46 U.S.C. 2101 and the term was only used once in that context, so instead we added a reference to 46 U.S.C. 2101 directly to our definition of "assistance towing" in § 136.110.

#### "Crewmember"

Two commenters felt that the term "crewmember" should be defined as an individual who is listed on Form CG

735(T): Master's Report of Seamen Shipped or Discharged, so as to avoid any misunderstanding related to vendors who are onboard for maintenance or repair.

The Coast Guard has revised the definition in § 136.110 to match an existing definition of "crewmember" in 46 CFR 16.105, paragraph (2)(iv) of which would exclude vendors who are onboard to conduct maintenance or repair work. Also, please note that the COI will list crewmembers required to be onboard and persons in addition to the crew that may be carried onboard the vessel.

#### "Disabled vessel"

One commenter noted that some dead ships can range up to 900 feet in length and suggested that we clarify our definition of "disabled vessel" and set some limit on a dead ship's size for purposes of assistance towing. We note that a dead ship is a ship without the benefit of mechanical or sail propulsion. The commenter's concern appears based on § 136.105 excluding vessels used for assistance towing from subchapter M applicability. We defined "assistance towing" to mean "towing a disabled vessel for consideration."

The Coast Guard disagrees about the need to amend our proposed definition of "disabled vessel." We note that a dead ship would fit our definition if the vessel regularly

operated under its own power but was temporarily disabled. The Coast Guard does not see a need to include a specific length criterion for dead ships in its definition of "disabled vessel" because not all assistance towing vessels are the same length or horsepower and the local COTP would assess the size and number of towing vessels needed to assist a dead ship.

#### "Downstreaming"

A maritime company suggested we insert "attempting to land" in place of "landing" in our proposed definition of "downstreaming." The Coast Guard acknowledges that downstreaming includes unsuccessful as well as successful attempts to align with a barge or other object, but has replaced the word "landing" with the words "in order to approach and land squarely on" instead of the commenter's suggested words. Also, we amended the definition by replacing the limited reference to the "end of the barge" with "a fleet, a dock, or another tow." Finally, we inserted the words "with the current" to describe downstreaming and to reflect the nature of our concern in § 140.610(e) where we require all exterior openings at the main deck level to be closed when a towing vessel is downstreaming.

#### "Engine room"

In reviewing the definition of "engine room" in the NPRM, the Coast Guard decided the word "area" was too broad; accordingly, we have replaced "area" with "space," which is commonly used and understood in the maritime industry to refer to a specific room (also see the definition for "Accommodation space" in § 136.110).

#### "Element"

After reviewing this definition, which as proposed, only applied to safety management systems, we decided to delete it as the term "element" is also used within the subchapter with regard to surveys and audits. Additionally, whenever the term is used, its meaning is clear.

#### "Essential system"

A company requested that we replace references to "vessel" with "towing vessel" in our definition of "essential system." Another commenter noted that the definition of "essential systems" is similar to the term "critical systems" in the ISM code, suggesting that the terms be aligned or at least cross-referenced for clarification. An association whose members trade on all five of the Great Lakes noted that the definition of "essential system" is very broad and needs to be scaled back to systems that are truly essential so as to help

ensure consistent application, and that as written, it is difficult to identify a shipboard system other than galley equipment that is not essential.

Regarding the first comment, the Coast Guard disagrees with the suggestion because this entire subchapter pertains to towing vessels, and we believe references to "vessel" in our definition of "essential system" clearly refer to towing vessel. We agree it is important to distinguish "vessel" from "towing vessel" in the few contexts in subchapter M where it is necessary, but we do not view our definition of "essential system" as one of them. We made no change from the proposed rule based on this first comment. In response to the second comment, to better align our definition with critical systems in ISM code, we added language to include critical systems identified in a part 96-compliant SMS. As for scaling back systems included, the Coast Guard disagrees. We believe that the definition of "essential system" accurately covers those systems that are required in subchapter M to ensure a vessel's survivability, maintain safe operation, control the vessel, or ensure safety of onboard personnel.

#### "Excepted vessel"

Many commenters, including an association and various towing companies, supported the concept of "excepted

vessel," under which towing vessels operating solely in  
fleeting and harbor services would not be required to meet  
certain equipment requirements in part 143. Several of the  
commenters suggested that the definition of "excepted  
vessel" should be clarified or expanded to specify  
activities such as moving vessels on and off drydocks or to  
and from cleaning docks. Also, commenters stated the  
definitions should encompass the full range of activities  
commonly performed by towing vessels in limited geographic  
areas or harbor assist service and that failure to do so  
will potentially endanger the economic viability of small  
to medium size harbor/fleeting companies and consequently,  
the small to medium size ports and industries they service.  
One towing company requested clarification of the meaning  
of "solely," because towing vessels often engage in  
different types of towing operations throughout their life-  
spans. An individual recommended that the term "harbor  
assist" in the definition of "excepted vessel" should be  
replaced by "assistance towing" to be consistent with the  
applicability exclusion paragraph in § 136.105(a)(2)(i) or  
with "recreational assist." Also a company pointed to the  
need to improve our definition of "excepted vessel" in §  
136.110 specifically as it applies to harbor assist  
vessels, a common term that it noted was used for vessels



that conduct ship assist activities helping larger vessels in and out of port. One towing company opposed the concept of excepted vessels and expressed the view that all towing vessels should meet the same requirements. Another company also opposed exempting fleeting or limited route vessels from the proposed provisions, because such vessels may operate in close proximity to chemical plants and barge fleets. The commenter warned that such vessels may have minimal safety standards and operators may modify their vessels to benefit from the proposed provisions. An individual provided examples of vessels that work in fleeting areas but also travel many miles away from their base of operations without proper equipment. One commenter pointed out that the example of a limited geographic area ("a fleeting area for barges or a commercial facility") in the definition of "excepted vessel" conflicts with the proposed definition of "limited geographic area."

The Coast Guard views the excepted vessel category as a valuable tool to more precisely tailor regulations. We have amended the definition of "excepted vessel" by removing the examples of limited geographic area activities. The term "limited geographic area" is defined in § 136.110 and allows local COTP discretion to determine limited geographic areas for her or his zone. Further, we

note that, in addition to certain system and equipment requirements in part 143, excepted vessels are also not subject to fire protection requirements in §§ 142.315 through 142.330. In terms of clarifying the definition, we did change it to make it clear that excepted vessels are subject to subchapter M, but not to certain requirements in the subchapter. Accordingly, we changed "exempted" to "excepted" when describing action by the OCMI that would make a towing vessel excepted.

As for the recommendation that we clarify or expand on the list of specific activities within limited geographic area and harbor assist service, the Coast Guard disagrees. Instead, we have removed the examples of activities within a limited geographic area in favor of leaving the discretion with the local COTP, as stated in the definition of limited geographic area, and not have what some may read as an exclusive list of examples in our definition of "excepted vessel" that references limited geographic area. However, additional guidance beyond this rule may be developed to help the industry and public understand how operating in a limited geographic area may impact the equipment requirements if they are an "excepted vessel". The definition of "harbor-assist" remains identical to the existing definition in 46 CFR 10.107. Further, the

definition of "excepted vessel" also contains the provision for the cognizant OCMI to except vessels based on reasons submitted by the vessel owner or managing operator as to why the vessel does not need to meet certain system and equipment requirements in parts 142 and 143 for the safe operation of the vessel. We believe that the ability to except certain vessels from specific equipment carriage requirements provides relief from the potential economic burden on these vessel owners.

As for clarifying the meaning of "solely" in our definition of "excepted vessel," in § 136.110, the Coast Guard sees no need to do so. The definition says "[u]sed solely," for any one or a combination of the services listed. Therefore, subchapter M provisions not required of excepted vessels would be required of a towing vessel subject to subchapter M whenever it is conducting towing operations not listed in the definition of "excepted vessels," unless it has been excepted by the cognizant OCMI. When a vessel is exclusively used in one or more of the excepted activities it is not subject to certain provisions of Subchapter M. However, if the vessel engages in activities that are not excepted, then it may be subject to those provisions even if this activity only occurs intermittently.

In the NPRM, we proposed a definition for harbor-assist that is identical to the existing definition in 46 CFR 10.107. To be excepted, a vessel would need to be subject to subchapter M, and in the applicability section, § 136.105, we state that subchapter M is not applicable to towing vessels "used for assistance towing," so we would not include "assistance towing" in activities for excepted vessels. We also exclude towing vessels engaged in towing recreational vessels for salvage, or transporting or assisting the navigation of recreational vessels within and between marinas and marina facilities, within a limited geographic area. Harbor assist and assistance towing are two separate and distinct operations, both of which we have defined in § 136.110. We have made no changes from the proposed rule based on these comments.

We have amended the definition of "excepted vessel" to remove the reference to "restricted service" and, as noted above, to remove examples from the limited geographic area sentence that may have been too narrowly focused and conflicting with the definition of limited geographic area.

"Excursion party"

One commenter suggested that the term "excursion party" be defined as "a group visiting the vessel for no specific business purpose."

The Coast Guard added a definition for "excursion party" in this final rule; however we do not agree with the commenter's proposed definition. As addressed in § 136.245, any personnel (business, personal, etc.) not authorized to be carried by the COI would be considered by the OCMI when issuing an excursion permit.

#### "Flammable liquid"

One commenter suggested that we define "flammable liquid" and "combustible liquid" as they are defined in 46 CFR 30.10-15 and 30.10-22.

The Coast Guard partially agrees. The definitions in 46 CFR part 30 apply specifically to equipment required on tankers. The Coast Guard believes that adding these definitions would not provide any additional clarification for these rather common terms used in our fire protection and machinery and electrical systems and equipment regulations in 46 CFR parts 142 and 143. However, we did modify part 143 to reference part 30.

#### "Fleeting area"

We received comments from two maritime companies regarding our proposed definition of "fleeting area" in § 136.110. One commenter suggested inserting the words "or wait to load or unload cargo" after "where individual barges are moored or assembled to make a tow," and to

insert "towing" before "vessel" when referencing another vessel that will transport the barges in the tow to various destinations.

The Coast Guard agrees with the second recommendation, but not the first. The inclusion of the term "towing" to the description of "vessels" makes the definition clearer. We disagree with the first recommendation to insert the words "or wait to load or unload cargo" because here we are defining "fleeting area" which is focused on making a tow, as opposed to "limited geographic area" which may cover more activities. Reflecting the definition of "limited geographic area," we also inserted, "as determined by the local Captain of the Port (COTP)," after a reference to a limited geographic area in our "fleeting area" definition.

"Fully attended"

We deleted the definition of "fully attended" because we did not use the term in this final rule, nor did we use the term within the regulatory text of the NPRM.

"Harbor-Assist"

A maritime company suggested that for our definition of "harbor-assist," we add "shift" to "dock, undock, moor, or unmoor," and tie the escort of a vessel with limited maneuverability to these actions by removing the disjunctive "or" we have placed between those activities,

and to add two more activities at the end of the definition "to shift or tow barges within a limited geographic area; or to respond to an emergency situation or pollution event involving towing vessels, vessels with limited maneuverability, or barges." Another commenter agreed and also felt that the definition should include inland harbor and fleet vessels.

The Coast Guard disagrees. Regarding the recommendation to delete "or" and restrict both "dock, undock, moor, shift, or unmoor," and "escorting" to towing vessel actions involving a vessel with limited maneuverability, we do not see a need for this change to this definition, which we adopted word-for-word from 46 CFR 10.107. For a vessel to be escorted, the vessel needs some independent maneuvering capability, which is not true of all vessels a towing vessel may dock, undock, moor, or unmoor. We do not need to add "shift" to the definition because we believe any shifting is already captured by the words "maneuvers to dock, undock, moor, or unmoor a vessel." Also, there is no need to add shifting barges in a limited geographic area nor do we wish to add towing barges in a limited geographic area to this definition. While not self-propelled, a barge would be included in the definition's reference of a vessel, and we do not view

harbor-assist as encompassing the full range of activities covered by "towing." Finally, we do not see a need to add responding to an emergency situation or pollution event involving towing vessels, vessels with limited maneuverability, or barges to our definition of "harbor-assist." Both of these activities are already included within our "excepted vessel" definition. We have made no changes from the proposed rule based on these comments; our subchapter M "harbor-assist" definition remains consistent with the 46 CFR 10.107 definition.

#### "Horsepower"

A professional association and private citizen expressed support for our proposed definition of "horsepower" which is that stated on the COI which reflects "the sum of the manufacturer's listed brake horsepower for all installed propulsion engines." We made no changes from the proposed rule based on these comments.

#### "Independent"

One commenter suggested revising or deleting the definition of "independent" because it appears only in §§ 143.300 and 143.435.

Our proposed definition of "independent" in § 136.110 is and was intended to be focused on equipment. We agree that it is not the appropriate definition for the use of



"independent" outside of part 143, Machinery and Electrical Systems and Equipment. In response to this comment, we have removed the definition from § 136.110 where it would have been applicable to all of subchapter M and have placed it in part 143's definition section, § 143.115, where it is only applicable to that part. We believe the definition is useful as limited to that part and therefore, we have only restricted, and not deleted, the definition.

We use the word "independent" in a different context when we describe TSMs and TPOs, as in our definition of "audit" and "TPO" in § 136.110, and §§ 138.205(b)(4), 138.310(d)(4), 139.115(b)(1) and 139.120(p). In that context we will use the common definition of the term - to be free from the influence, control, or determination of another or others.

#### "Inland waters"

One commenter suggested deleting the proposed definition for "inland waters" because it is not defined in other 46 CFR sections and would be confusing when considering classes of vessels. The commenter felt that the terms "Inland waters, excluding Western Rivers" can be used instead.

The Coast Guard disagrees. "Inland waters" is defined in 46 CFR 10.107 and our subchapter M proposed definition

aligns with that existing definition. To address the reach of this and other § 136.110 definitions, we have inserted the introductory text of "As used in this subchapter" in § 136.110, which reflects our initial intent that definitions in that section have limited applicability. Also, in subchapter M we only use the term "inland waters" once, in the definition of "Western Rivers," and do not view it as generating confusion regarding classes of vessels. We have made no changes from our proposed definition of "inland waters" based on this comment.

#### "International voyage"

We received comments from two commenters requesting that the proposed definition of "international voyage" not include Canadian waters that are transit waters between Alaska and other States. The commenters noted that towing vessels do not always make port calls in Canada during passage and are not considered international voyages and subject to SOLAS.

The Coast Guard does not see a need to amend our definition of "international voyage." Under our definition, towing vessels transiting directly from a U.S. port in the contiguous 48 states to the state of Alaska or the state of Hawaii would not be considered on an international voyage for purposes of subchapter M because

they would not be going to a port outside the United States.

"Lakes, bays, and sounds"

We received two comments suggesting the proposed definition of the term "lakes, bays, and sounds" be clarified to state that the operations on Kentucky Lake are not to be included in the current definition of "lakes, bays, and sounds." Another commenter suggested that the definition is too broad to include lakes, bays, and sounds in inland river systems, and should be revised to exempt lakes, bays, and sounds that are part of the inland or Western River systems.

The Coast Guard uses the term "lakes, bays, and sounds" in § 136.230 as one of a number of major headings under which each area of operation - referred to as a route - is described on a towing vessel's COI. With the exception of "rivers," "Lakes, bays, and sounds," is the least severe of the routes. Our definition matches that used for small passenger vessels in subchapter K (46 CFR 114.400) and small passenger vessels in subchapter T (46 CFR 175.400). The Coast Guard does not intend to create exemptions for all types of inland towing operations, or to provide exemptions for particular areas without cause. We note, however, that under § 136.230 the OCMI may consider

route-specific requirements of subchapter M when designating a permitted route. We have not made a change from the proposed rule based on these comments.

#### "Limited geographic area"

One commenter asked for further definition of the term "limited geographic area."

Our definition of "limited geographic area" - "a local area of operation, usually within a single harbor or port" - is intended to be flexible enough to reflect the wide range of local operations. The local COTP has the discretion to determine limited geographic areas for his or her COTP zone. We do use the term "limited geographic area" as a factor in our definition of "excepted vessel," but we believe it is appropriate to not impose certain requirements, such as for additional fire-extinguishing equipment, on vessels we identify as excepted vessels, or impose less rigid lifesaving equipment requirements on vessels that operate in a limited geographic area. We assess excepted vessels and certain vessels operating in a limited geographic area as presenting a reduced risk with respect to certain subchapter M requirements.

#### "Major conversion"

One commenter requested that we change our definition of "major conversion." First, the commenter would

establish a threshold up front that all the factors discussed must meet - that changes result in "essentially a new towing vessel" - while also leaving that same standard in the last ("otherwise") factor. Second, the commenter would move our reference to a determination by the Coast Guard to the end of the definition. And third, the commenter would limit the "substantially prolonging the life of the towing vessel" factor by expressly excluding "the replacement of propulsion engines" from that factor.

The Coast Guard agrees with the recommendation that we move our reference to a determination to the end of our definition of "major conversion." This change makes our definition more consistent with the statutory definition in 46 U.S.C. 2101 (14a) and our existing 46 CFR 28.50 definition in subchapter C for uninspected vessels. We also clarified that reference from vaguely stating "as determined by the Coast Guard" to "as determined by the Commandant." This change better aligns the definition with the phrasing used in existing text.

We received comments from professional associations, maritime companies, and other companies who expressed concern over the phrase "substantially prolongs the life of the vessel" in the proposed definition of major conversion. Commenters felt that the definition should be clarified to

explain that routine activities like maintenance or part replacement are not considered major conversions, but only those activities that would result in the converted vessel becoming a new vessel. Two commenters, a private citizen and maritime company, requested examples of what is considered a major conversion. Another maritime company suggested that the term, as it is currently proposed, would apply "new vessel" requirements to existing vessels, and discourages the maintenance of or investment in existing towing vessels.

We see no reason to adopt the commenter's two other suggested changes that deviate from the statutory definition. The first change would introduce an unexplained redundancy and the second would expressly exclude the replacement of propulsion engines from consideration of actions that substantially prolongs the life of the vessel. As reflected above, based on these comments, we have revised our definition to make it consistent with existing definitions in 46 U.S.C. 2101(14a) and 46 CFR 28.50 of subchapter C, and we did not adopt the commenters' two other suggested changes. The Coast Guard believes a replacement of propulsion engines is normally undertaken to prolong the service life of a vessel, and therefore fits the definition of "major conversion." To

match the wording in 46 CFR 28.50, we changed "Coast Guard" to "Commandant" and added part 28's definition of "Commandant" to § 136.110. Major Conversion determinations are made by the Coast Guard Marine Safety Center on a case-by-case basis.

#### "Major non-conformity"

One commenter suggested the following text for the definition of "major non-conformity" which specifically identifies deviations as being from the safety management system and replaces our reference to the lack of effective and systematic implementation of the TSMS as being included as a major non-conformity, to references to items that would be considered a more significant breakdown or failure of the SMS: "Major Non-Conformity means an identifiable deviation to the safety management system which poses a serious threat to personnel, vessel safety, or a serious risk to the environment; where a large number of non-conformities exist in an area or where similar non-conformities exist throughout the company or vessel then this demonstrates a more significant breakdown or failure of the safety management system."

The Coast Guard has simplified its definition of "major non-conformity" to include the term "non-conformity"; by referring to "non-conformity", we are

including a failure to conform to the SMS. Even though the definition in 33 CFR part 96, our regulations implementing SOLAS and ISM Code provisions for safety management systems, includes an example of a lack of effective and systematic implementation, we have deleted that language from the definition in § 136.110. We did not agree with the suggested definition, which could be read as creating an additional standard for a "more significant breakdown."

"New towing vessel"

One commenter suggested that we remove the following factor in our proposed definition of "new towing vessel": towing vessels that underwent a major conversion initiated on or after the effective date of our final rule.

The Coast Guard disagrees with this recommended change to our definition of "new towing vessel." Standards for new vessels are sometimes set higher than for existing vessels as a means of ensuring improved safety standards over time without imposing undue costs on existing vessels. If we left major conversions out of the definition of new vessels, then we would provide incentive for existing vessels to undergo major conversions to avoid having to meet new vessel standards. Granting existing vessels the status of being "grandfathered" is a valuable regulatory approach, but factoring major conversions into our



definition of "new vessels" provides a means of controlling a potential abuse of "grandfathered" status and is consistent with other 46 CFR subchapters. We have not made any changes from the proposed rule based on this comment.

However, upon further review of the definition, we determined that it should be amended for other reasons. As proposed, the definition was based on the date the vessel was contracted for or the date the keel was laid. More often than not, these will be two separate dates which could lead to confusion as to whether or not a vessel is a "new towing vessel." We amended the definition to base the determination on the date the keel was laid or the vessel is at a similar stage of construction in order to account for those instances where a vessel might be built in a modular mode of construction. We also removed paragraph (3) of the definition regarding vessels built without a contract because we viewed it as unnecessary given our removal of a reference to a contract in paragraph (a).

The second reason for amending the definition is to ensure that owners, designers, and builders have sufficient time to adapt and incorporate the requirements applicable to new vessels into the design and construction of a vessel. As proposed, the date for a new vessel was 30 days after the regulation publication date. In reviewing a

commenter's request for more time to comply with the final rule, we concluded that 30 days is too short a time period. It would be very difficult and costly to make changes in line with the "new vessel" requirements in those instances where the design of a vessel is almost complete. We have determined that for smooth transition and implementation, an additional year is needed, and we amended the definition accordingly.

#### "Objective evidence"

One commenter recommended we add records of an approved third-party organization as another example in our definition of "objective evidence" in § 136.110.

The Coast Guard agrees with this suggested change and has amended the definition accordingly. We already list classification society reports as an example, and would consider reports or records from a TPO as a similarly appropriate example reflecting an independent assessment.

#### "Pressure vessel"

One commenter suggested we amend our definition of "pressure vessel" to simply refer to closed containers designed to hold gases, liquids or a combination at a pressure substantially different from ambient pressure - instead of just "under pressure." Another commenter suggested adding the following text as a definition for

"heating boiler": "An enclosed steel or cast iron container that uses an energy source to heat water (or make steam) that is sent through heat radiating devices in the machinery space to heat a towing vessel."

The Coast Guard agrees with the comment regarding pressure being substantially different from ambient pressure and in response inserted the words "greater than atmospheric pressure" at the end of the definition. We also agreed with the need to incorporate language to include boilers so we broadened the definition of "pressure vessel" to include "unfired" and "fired" pressure vessels which incorporate boilers.

"Random selection of a representative sampling"

One commenter suggested the need for defining "random selection of a representative sampling" for better consistency in the auditing process.

We do not agree that a specific definition is needed for "random selection of a representative sampling." We feel that "random selection of a representative sampling" is a common safety management system and auditing term that should be recognized and understood by any ISO-9001-trained internal or external auditor. In a related external audit provision in § 138.410(f), we removed a vague reference to samples having to be statistically valid.

#### "Recognized classification society"

We shortened the definition of "recognized classification society" by focusing on the core of the definition: a classification society recognized by the Coast Guard in accordance with 46 CFR part 8.

#### "Recognized hazardous conditions"

We deleted the definition of "recognized hazardous conditions" because we do not use the term in this final rule, nor did we propose to use it in the regulatory text of the NPRM.

#### "Rescue boat"

One commenter noted that "skiff" is referenced in § 140.420(d)(4), which contains a training requirement if the skiff is "listed as an item of emergency equipment to abandon ship or man overboard recovery" and that "rescue boat" also appears in § 140.420. The commenter recommends that if a rescue boat is a separate craft from a skiff, as our use of the two terms in § 140.420 suggests, then we should define "rescue boat" in § 136.110 in addition to having defined "skiff" there.

The Coast Guard agrees with the recommendation that we add a definition of "rescue boat" to § 136.110. We do consider a rescue boat as a separate craft from a skiff. We have added the same definition of "rescue boat" in §

136.110 that appears in three existing Coast Guard regulations. This definition distinguishes the dedicated purpose of a rescue boat - to rescue persons in distress and to marshal survival craft - from the general nature of a skiff, a small auxiliary boat carried onboard a towing vessel that might be used in emergency situations.

#### "Replacement in kind"

We have added a new definition to § 136.110 for the term "Replacement in kind" which was undefined in the NPRM but appeared several times in part 143. "Replacement in kind" generally means replacing a failed component with the same component, or a part with the same technical specifications as the original design. Replacements in kind may normally be accomplished by the crew, or a shipyard, as part of routine maintenance or repairs, and may not require notification to the OCMI.

#### "Safety Management System"

Two commenters recommended inserting the following 11 italicized words in our proposed definition of "Safety Management System":

Safety Management System means a systematically structured and documented system enabling the owner or managing operator and towing vessel personnel to identify and manage interrelated process and

effectively implement the owner or managing operator's safety and environmental protection policies and that is routinely exercised and audited in a way that ensures the policies and procedures are incorporated into the daily operation of the vessel and company.

In addition, one commenter recommended replacing the word "audited" with "evaluated" in the above definition.

The Coast Guard partially agrees with the proposals to change this definition. We have amended the definition by adopting a modified version of our 33 CFR part 96 definition that identifies those enabled by the SMS and the purpose of the SMS with respect to subchapter M. We disagree with changing the term from "audited" to "evaluated" as an audit is a clearly defined and recognized activity with respect to safety management systems.

#### "Survey"

One commenter suggested that the difference between "audit" and "survey" needs to be clarified in § 136.110, as well as with respect to the Coast Guard option under proposed § 136.150 and the TSMS option under proposed § 136.205. Another commenter noted that these two terms, in addition to "inspection" are used interchangeably in the NPRM, as are the words "auditor, inspector, and surveyor." There were also comments about the need to clarify the

frequency of audits, inspections, and surveys, and which ones may be conducted by third parties.

The Coast Guard believes that our definitions of these two terms are clearly distinguishable. Our definition of "survey" in § 136.110 focuses on compliance with subchapter M and other authorities - "an examination of the vessel, its systems and equipment to verify compliance with applicable regulations, statutes, conventions, and treaties." Our definition of "audit" in § 136.110 is more focused on systems set up to ensure that compliance. Neither proposed § 136.150, Annual and periodic inspections, nor proposed § 136.205, which describes the COI, refer to audits or surveys.

Regarding the word "inspection," we did not define that term which applies to all vessels subject to subchapter M because they are all "subject to inspection" under 46 U.S.C. 3301. In this rule, we primarily use the word "inspection" to distinguish a towing vessel that has selected the option of an annual inspection by the Coast Guard instead of a TSMS option under which surveys and audits are conducted. But regardless of the option selected, under proposed §§ 136.140 and 136.145 the Coast Guard would conduct inspections for certification on all vessels seeking to obtain or renew a COI. An inspection is

similar to a survey in that both involve an examination of a vessel to determine whether it is in compliance with applicable regulations or other legal authorities. In reviewing proposed §§ 136.140 and 136.145, however, we reorganized these requirements and moved them into subpart B, Certificate of Inspection, as §§ 136.210 and 136.212.

We believe this response should clarify what we mean by the use of these terms but knowing the frequency of these activities may also help. Section 137.200 identifies the frequency of inspections associated with the Coast Guard inspection option. For vessels under the TSMS option, external and internal surveys and audits are required. Sections 137.205 and 137.210, respectively, identify the frequency of surveys under the external and internal survey programs. Finally, §§ 138.310 and 138.315, respectively, identify the frequency of external and internal audits.

#### "Third-party organization"

We received comments suggesting the need to clarify or remove our proposed definition of "third-party organization." The commenter suggested that the term is inconsistent with our repeated use of the proposed term "approved third-party organization" in part 139 and would be redundant if we adopted his recommendation to amend our



proposed definition of "approved third party" to make it clear it only refers to TPOs. One commenter suggested converting our proposed definition of "approved third party" in § 136.110 to a definition of "approved third party organization" and to add "organization" to the definition so the term "means a third party organization approved by the Coast Guard in accordance with part 139 of this subchapter."

The Coast Guard agrees that our proposed definitions of the terms "approved third party" (ATP) and "third-party organization" (TPO) may cause confusion, so we deleted the term ATP and modified any references to approved third-party surveyors or auditors to make clear that such surveyors or auditors would be from a third-party organization or TPO. Also, we deleted the word "approved" used in front of TPO because by definition, TPOs are approved. Our definition of third-party organization in this final rule makes it clear that the organization is approved by the Coast Guard to conduct independent verifications to assess whether TSMs or towing vessels comply with applicable requirements contained in this subchapter. Also, we have amended § 139.115(b) to make that approval process clearer and replaced a reference to an organization having to meet subchapter M requirements

with one to expressly include the standard of meeting part 139 requirements for TPOs.

This comment also caused us to notice that our TPO definition needs to be amended to better reflect the work being done by the TPO. We added the words "assess whether" to the definition of "TPO."

#### "Tow"

One company recommended that we define "tow" as a vessel or vessels being moved by a towing vessel in contrast to our proposed definition that identifies the towing vessel as being part of the tow which would also include one or more barges or a vessel not under its own power.

The Coast Guard concurs with the need to clarify that tow refers to what the towing vessel is moving - be it another vessel, barge, or some other object. We have revised our definition to read "Tow means the barge(s), vessel(s), or object(s) being pulled, pushed or hauled alongside a towing vessel." This is consistent with our use of the term as a noun in our rule (e.g., in § 140.625, "the movement of a towing vessel and its tow"). Reflecting this definition, in § 140.805 we added "or objects" to barges and vessels when describing what may make up a tow.

#### "Towing Safety Management System (TSMS)"

On reviewing the comments, the Coast Guard decided to add a definition of TSMS in § 136.110 rather than just rely on the information contained in part 138 on TSMS compliance.

"Towing Safety Management System (TSMS) certificate"

We received several comments suggesting two separate definitions of the TSMS certificates be added: one for the owner or managing operator and one for each of the towing vessels found to be in compliance with the TSMS.

The Coast Guard has not defined "TSMS certificate" and does not agree that two separate definitions should be added or that a separate certificate for the company and the towing vessel needs to be issued. TSMS certificates are issued to the owners or managing operators and a list of vessels covered by the TSMS must be maintained, as described in § 138.305.

"Travel time"

Four commenters, including maritime companies and a professional association, suggested deleting the proposed term "travel time" because it does not appear anywhere else in the regulation. One commenter suggested that the proposed term needs to be amended to clarify the application to daytime operators who commute back and forth to work, not travel to a large commercial tug/barge unit

that operates like a self-propelled vessel. Conversely, other commenters suggested that the definition should not include travel back and forth. One company asserted that if the travel time is not included, crewmembers that do not live in close proximity to work will use the majority of their hours traveling.

The Coast Guard agrees that our definition of "travel time" should be deleted from the final rule because we do not use that term in subchapter M.

#### "Unsafe condition"

One commenter, citing § 137.325(d), asked the Coast Guard to create a good definition of an "unsafe condition" that can be consistently applied by companies, auditors, and surveyors, as well as the Coast Guard.

The Coast Guard agrees with the commenter's request and has added a definition of "unsafe condition" to § 136.110, which includes observation of a major non-conformity on board a vessel.

#### "Unsafe practice"

One commenter suggested that in the definition of "unsafe practice" the list of items that may be subject to significant risk of harm be supplemented by adding "and the vessel" after "property."

The Coast Guard disagrees. A vessel belongs to an organization or person and, therefore, is included by the word "property." We made no changes from the proposed rule based on this comment, but recognizing it can be bad practice to do something even once, we inserted reference to a single action, in addition to a habitual or customary action.

#### "Western Rivers"

We received several comments, mostly from maritime companies, regarding the proposed definition of "Western Rivers." Several maritime companies suggested that the definition should be consistent with the one in 33 CFR 164.70, which is identical except for it adds waters specified by 33 CFR 89.27 "and such other, similar waters as are designated by the COTP." Commenters also asked that waterways mentioned in 33 CFR 89.27 be included. It was suggested that the consistency in definitions will help avoid new regulations for those vessels operating on the Gulf Intracoastal Waterway. One commenter noted that the proposed definition of "Western Rivers" is inconsistent with the definition in the TSAC report and current regulations. A trade association believed the change in the definition for "Western Rivers" would increase the burden on mariners. A maritime company noted that the NPRM

lacks a definition, or a route description in § 136.230, that covers vessels operating in the Inland areas of the waterway system within the Sea Buoy system, which includes the Gulf Intracoastal Waterway. The commenter suggested that Western Rivers be defined to include those vessels operating within the Sea Buoy system.

Based on these comments, the Coast Guard has decided to adopt the existing 33 CFR 164.70 definition of "Western Rivers" which applies to navigation safety regulations for towing vessels.

This is similar to the definition TSAC used in its September 7, 2006 report (USCG-2006-24412-0004). Their definition ended with "and waters connecting or tributary thereto" instead of referencing waters designated by the COTP. Waters specified by 33 CFR 89.25 and 89.27, for inland navigation rule purposes, include all of the connecting and tributary waters specified in TSAC's definition, and our addition of the 33 CFR 89.27 reference includes the Gulf Intracoastal Waterway in the definition. Also, making our definition consistent with the one in 33 CFR 164.70 allows COTPs to designate similar waters.

Multiple factors in 33 CFR 62.27 are considered in the positioning of safe water marks, which are also called "sea

buoys.” These factors may cause them to be placed seaward or shoreward of demarcation lines. And, while each safe water mark has a plotted position in the Light List available via 33 CFR 72.05-10, unlike demarcation lines in 46 CFR part 7, there are no lines associated with safe water marks. Therefore, we have decided to use the term “navigational demarcation lines” currently used in 33 CFR 164.70.

#### “Workboat”

One commenter suggested we amend our definition of “workboat” to include “vessels undergoing cleaning or repair,” besides equipment, as things that the workboat pushes, pulls, or hauls alongside within a worksite.

The Coast Guard disagrees with the proposed change. However, we have amended the definition of “workboat” to remove the specific listing of things being towed. We believe that the revised definition of workboat and our definition of worksite - which already included a list of certain activities which we amended to reflect the movement of equipment but specifically excluded the movement of barges carrying oil or hazardous material - provide sufficient flexibility to the OCMI to cover operations not specifically listed.

#### “Worksite”

One commenter suggested that we amend the definition "worksite" so all areas within which workboats are operated over short distances for dredging, construction, maintenance, or repair work, including shipyards, owner's yards, and lay-down areas used by marine construction projects, would not require OCMI designation as worksites. Other worksites may be specified by the OCMI. Further, a maritime company suggested adding the terms "cleaning facilities, fleeting areas" to the definition of "worksite."

The Coast Guard disagrees with these recommendations. We believe it is appropriate for the cognizant OCMI to designate worksites based on the factors and activities listed and their possible impacts on other waterway users. Therefore, we have decided not to adopt the expanded definitions being suggested here. We have made no changes from the proposed rule based on these comments.

#### Options for obtaining a Certificate of Inspection

A commenter opposed the option of obtaining certification by annual Coast Guard inspections and recommended deletions of provisions in proposed §§ 136.130, 136.140, 136.145, 136.150, 136.165, and 136.170.

The Coast Guard recognizes that some in the industry view the option for Coast Guard traditional inspections as



not having a role in the future of the regulation of towing vessels. We believe that the development of and adherence to a TSMS that is tailored to a company's unique operations and that provides for an authoritative reference for all members of the organization improves safety for the company's vessels. As the TSAC Economic Analysis Working Group Report (USCG-2006-24412-0007) stated, the costs to a small company to implement and maintain an SMS may be more difficult to absorb than it is for a large company. These regulations do not preclude any towing vessel company from adopting a safety management system. However, the structure of subchapter M provides towing vessel companies with flexibility in how to comply with this subchapter.

With respect to the various sections mentioned by this commenter, we have made changes in this final rule. Proposed § 136.130 has been revised and retitled to better depict the purpose of the options it presents for documenting compliance with the requirements of this subchapter and to specifically note that a Certificate of Inspection is obtained following a Coast Guard inspection. We have moved proposed §§ 136.140 and 136.145 into subpart B of part 136 - Certificate of Inspection - as amended § 136.210 and new § 136.212. Also, we merged proposed §§ 136.150 and 136.165 into a new § 137.200 to delineate the

processes under the Coast Guard inspection option from the TSMS option processes in part 137. The proposed part 137 had laid out the TSMS procedures but was silent on the Coast Guard option. Further, we redesignated and amended proposed § 136.170 as new § 136.202.

A commenter requested an appeal process to permit the immediate review of an inspector's determinations.

The Coast Guard notes that, as we proposed, the appeals process is described in § 136.180. Further, this final rule contains amendments to 46 CFR part 1 that institutes a process for appealing the decisions of TPOs acting on behalf of the Coast Guard.

#### Requirements for existing vessels during delayed implementation

In response to comments regarding the cost of requirements in parts 140 through 144, and concern about being able to meet those requirements soon after the rule is made effective, we delayed implementation of nearly all requirements in parts 140 through 144 until July 20, 2018. We made the rule effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] so that the Coast Guard can begin to apply other subchapter M regulations to review applications from those seeking to become TPOs and to impose deadlines for towing vessels to decide which

option to choose - TSMS or Coast Guard annual inspections. We added § 136.172 to ensure that we do not leave a gap after the rule becomes effective but before most requirements in parts 140 through 144 are implemented.

Section 136.172 requires existing towing vessels that will be subject to subchapter M to remain subject to Coast Guard regulations applicable to the vessel on [INSERT DATE 29 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] until the earlier of two dates: July 20, 2018 or the date the vessel obtains a COI.

#### Subpart B Certificate of Inspection

We received a comment on proposed § 136.200(d) urging that provisions from Marine Safety Manual Volume II, Section B, Chapter I, referencing 46 U.S.C. 3314 and completing a foreign voyage, should be added to the rule.

As reflected in § 136.200(d), towing vessels issued a COI under subchapter M are fully afforded the foreign-voyage-completion provisions of 46 U.S.C. 3314, Expiration of Certificate of Inspection. We made no changes from the proposed rule based on this comment, but on reviewing § 136.200, we decided to insert a reference to the COI phase-in period in proposed § 136.170 (now § 136.202) in paragraph (a). This insertion is intended to incorporate the date by which the vessel must obtain a COI and thereby

limit the statement that the vessel may not operate without having a valid COI onboard to the period after that date. Based on this review, we deleted proposed § 136.225, because it was redundant with § 136.200(c).

A commenter observed that companies choosing the Coast Guard inspection option should not be given a longer period of time to obtain a COI than companies choosing the TSMS option.

The Coast Guard agrees. We have amended, redesignated, and retitled the proposed § 136.170, Compliance for the Coast Guard option, as § 136.202, Certificate of Inspection phase-in period. This section now specifies when COIs are required for towing vessels subject to subchapter M regardless of the option selected. Also, we removed § 136.203 because it is no longer needed given our amendment to what is now § 136.202.

We received several comments on the phase-in process in proposed § 136.203, Compliance for the TSMS option. Several commenters suggested that the requirements for a TSMS and inspection requirement be phased in to allow for the industry to understand the new requirements and identify any specific waivers that may be needed. One commenter favored making sure there is about the same amount of work to be done in each of the 5 years that make

up an inspection cycle. Another commenter recommended a provision to extend the schedules in the event of a shortage of approved auditors or inspectors. A professional maritime association suggested that a phase-in approach will assist in the transition for vessel operators and auditors and reduce the strain on shipyards as they manage extensive drydocking that will occur while vessels await their inspections.

The Coast Guard generally agrees with these concerns. As discussed in response to an earlier comment, the Coast Guard has amended the requirements in proposed § 136.170 to set the same timetable for obtaining a COI regardless of which option the vessel owner or managing operator selects, and we have removed § 136.203, which had a separate timetable for those selecting the TSMS option. The phased approach in § 136.202 distributes the work load over a 6-year period from the effective date of this final rule. The Coast Guard has crafted this rule to phase in towing vessels over time for numerous reasons including spreading costs and workload over time. Section 136.202 provides a broad phase-in period for companies that choose either the Coast Guard or TSMS compliance option. As we stated in the NPRM, it will be up to six years before some vessels subject to subchapter M will need to obtain a COI.

However, we do not agree that we need to add a provision to extend the schedules more than we have done already in this final rule. We believe that there will be sufficient TPOs available within the new prescribed timeframes to conduct subchapter M audits and surveys. Similarly, the Coast Guard is preparing to have enough inspectors available to meet the demand for Coast Guard inspections within the new prescribed time frames.

A maritime company offered a phase-in timeline that depends on separate certificates for a company and their vessels. The commenter suggested that within 2 years of the rule's effective date a third-party would conduct an external management audit of a company and issue a Towing Company Safety Management System Certificate. Then during the following year, a third party would conduct external vessel audits of 25 percent of company's fleet and issue each vessel a Towing Vessel Safety Management System Certificate. Similar steps would be taken in subsequent years until in the sixth year, when all vessels would have to obtain COIs.

As we noted in response to another comment, we disagree with the suggestion that two certificates should be issued instead of one TSMS certificate. We therefore decline to adopt a schedule based on the issuance of

separate certificates for a company and the company's vessels.

In a submission to the docket, the National Transportation Safety Board requested the prompt publication of the final rule to avoid any further delay in regulating the safety of this largely unregulated sector of the commercial maritime industry. The same commenter felt that the proposed 6-year implementation period should be shortened.

We received a comment from a towing company suggesting that a shorter compliance period be applied to those operators who have not previously participated in the Uninspected Towing Vessel Bridging Program. The same commenter expressed the importance of consistent application of the final rule to all vessel operators. The commenter explained that by allowing some operators to bypass the requirements market rates will be affected, which will have a serious effect on small operators.

The Coast Guard concurs with the desire to publish this rule promptly and, in general, to apply it consistently to all vessel operators subject to subchapter M. We have explained why certain requirements are only applicable to new towing vessels and why excepted vessels do not need to comply with certain requirements. We

disagree with shortening the implementation period across the board or, specifically, for those companies that did not participate in the Uninspected Towing Vessel Bridging Program, because it was a voluntary program. We believe our implementation period is appropriate for this rule, which establishes both a safety management system option involving TPOs and new requirements for more than 5,000 towing vessels.

We received a few comments on proposed § 136.205, which identifies what the COI will describe. One commenter noted that minimum manning requirements in the COI, as required under this provision, should be allowed to be different for different types of towing vessels. Another commenter asked how "minimum manning" is to be determined. Another commenter requested allowing for multiple minimum manning standards depending on the route. A commenter suggested that this rulemaking should clarify the number of required crewmembers and allow the towing vessel to be operated by a single crewmember in certain circumstances.

Existing laws and regulations specify minimum levels of manning for towing vessels. As stated in § 140.205, manning regulations are contained in part 15 of this chapter and vessels must be manned in accordance with the case specific requirements included in the COI. As stated



in 46 CFR 15.705, the minimum safe manning levels specified in a vessel's COI take into consideration routine maintenance requirements and the ability of the crew to perform all operational evolutions, including emergencies, as well as those functions which may be assigned to persons in watches. The OCMI is empowered to establish a level of manning for a vessel above the minimum levels prescribed by law and regulation, based on the vessel's nature of operations and other parameters, including route.

One individual was unclear about whether proposed § 136.140 applied to those who have an approved TSMS, as well as those who choose the Coast Guard inspection option. One company asked for clarification of the sequence of events for COI issuance.

As noted above, our proposed § 136.140, Application for a Certificate of Inspection (COI), is incorporated into amended § 136.210 and applies to all vessels subject to subchapter M. Regardless of the inspection option chosen, the owner or managing operator must submit an application for inspection to the cognizant OCMI where the inspection will take place. As specified in § 136.130(d), the application should indicate which option the owner or managing operator is selecting.

We amended § 136.210 to make it clear how and when to apply for the initial COI. In our proposed § 136.140, we specified deadlines for renewing a COI, but not those for obtaining the initial COI. Our amended § 136.210 identifies the application and scheduling deadlines for the initial COI and reflects the same application and scheduling lead times for renewing a COI: submit the application at least 30 days before the vessel will undergo the initial inspection for certification, and schedule an inspection for the initial certification with the cognizant OCMI at least 3 months before the vessel is to undergo the inspection for certification. Amended § 136.212 sets forth the process of receiving a Coast Guard inspection at least once every 5 years and for receiving a new COI after being inspected by the Coast Guard.

We received one comment recommending that the last line of proposed § 136.145(b), now redesignated as § 136.212(b), which describes the nature of inspections, should specify that inspection of the vessel's pollution prevention systems and procedures should be in accordance with any Memorandum of Understanding (MOU) between the Coast Guard and the Environmental Protection Agency.

The Coast Guard disagrees with this recommendation because we do not view the proposed amendment as either

necessary or desirable. We believe that the current language that the "inspector will also examine the vessel's pollution prevention systems and procedures" is appropriate. An inspection involves an examination of a vessel to determine whether it is in compliance with applicable regulations or other legal authorities. There are existing pollution prevention regulations that would pertain to inspected towing vessels that are not covered by any Coast Guard MOU with the EPA. We have not made any changes in this final rule based on this comment.

An individual and a company requested clarification of the inspection frequency in proposed § 136.145. Two companies suggested that frequency and level of inspection should be accomplished on a risk basis.

In this final rule, § 136.145 was renamed § 136.212 and states that towing vessels subject to subchapter M will be inspected at least once every 5 years. Towing vessels choosing the TSMS option would be subject to annual surveys between those inspections, while towing vessels choosing the Coast Guard Inspection option would be inspected annually. See §§ 137.200, 137.205, and 137.210.

A company expressed concern about whether the Coast Guard would have resources to hire a sufficient number of

competent vessel inspectors for convenient scheduling for the company, including drydock scheduling.

The Coast Guard is prepared for the estimated demand for annual inspection from owners and managing operators selecting the Coast Guard annual-inspection option. The Coast Guard will closely monitor the demand for inspections and make resource adjustments as necessary. However, based on our reassessment of Coast Guard resources, we have removed the option in proposed § 136.105(b) for vessels not covered by subchapter M to request application of this part.

Another company requested that the Coast Guard do everything possible to ensure that Coast Guard inspections and third-party audits or load line surveys are coordinated to prevent an undue burden on industry.

The Coast Guard agrees there are benefits to coordinating audits, surveys, and inspections, and will attempt to do so. However, there may be times when coordination is not possible due to scheduling and operational constraints.

An association asked that the Streamlined Inspection Program be added as an alternative inspection process.

The Streamlined Inspection Program, available under 46 CFR part 8, is an available option to obtain a renewal of a

COI. If using that option, the owner or managing operator must comply with the procedures identified in part 8. We do not need to add text to subchapter M for this part 8 option to be available to vessels subject to subchapter M.

An individual suggested we eliminate the term "uninspected towing vessel," because towing vessels might not be inspected currently for structural construction, but are regulated and are subject to Coast Guard rules for daily operation.

The Coast Guard agrees that all towing vessels are regulated by the Coast Guard to some extent but are not necessarily inspected. We have chosen to continue to identify those towing vessels not subject to subchapter M, and that are subject to subchapter C, as uninspected towing vessels.

We received several comments on proposed § 136.210(b)(3)(i), which would require that an application for initial certification include objective evidence that the towing vessel's structure and stability comply with applicable requirements. Commenters recommended that for existing towing vessels without a stability letter, an audit report noting that the towing vessel is being maintained and operated in a manner that does not compromise its watertight integrity or stability should be

sufficient to satisfy this requirement. Others contended that stability is not an issue on inland waterways, and that there should be no stability requirements for Western Rivers towing vessels.

The Coast Guard has amended § 136.210 to more clearly identify what the owner or managing operator needs to provide the Coast Guard for both the Coast Guard and TSMS options with the application for inspection. Note that for the TSMS option the application must now include objective evidence of having a TSMS compliant with part 138 and that the vessel meets the requirements of this subchapter.

Structural requirements for existing vessels are addressed in § 144.200. To satisfy that regulation, if a vessel is not built, equipped, and maintained to conform to the rules of a recognized classification society appropriate for the intended service and routes, the applicant must provide evidence that the vessel has been both in satisfactory service insofar as structural adequacy is concerned and that the vessel does not cause its structure to be questioned by either the OCMI or TPO. Stability requirements for existing vessels are addressed in § 144.300 and under this provision, for those vessels without a stability document, documentation of operating

history - for example through audit reports - is one option to meet § 144.300 requirements.

The Coast Guard believes that stability is a concern on any vessel, regardless of service or operating area. Towing vessels must be maintained and operated so the stability of the vessel is not compromised.

Proposed § 136.210(b)(5) (redesignated as § 136.210(a)(2)(ii)) would require a description of any modification to the vessel. Some commenters suggested that the provision should be limited to major or substantial modifications to the design and construction of the towing vessel.

The Coast Guard disagrees with these suggestions. The Coast Guard needs to be aware of changes and modifications made to inspected vessels. We will use this information to determine if a single change or incremental changes made to a vessel over time will affect a vessel's suitability for its route or service. However, replacements in kind, as defined in this subchapter, are not considered modifications. We have made no changes from the proposed rule based on these comments, but we did clarify that a description of any modification is only necessary when renewing the COI.

With respect to proposed § 136.215, which describes the period of validity of a COI, we received two comments urging the Coast Guard to add language to the rule so that noncompliance with a TSMS would not immediately result in the invalidation of the COI.

The Coast Guard acknowledges that § 136.215 states that if the TSMS certificate expires or is revoked, then the towing vessel's COI becomes invalid. Non-conformities or major non-conformities found during surveys or audits do not automatically invalidate the TSMS or the COI. However, deficiencies or non-conformities that are egregious could result in the OCMI removing the COI from the vessel. Ultimately, the status of the COI is determined by the OCMI. Based on the extent of the deficiencies or non-conformities found during an inspection, survey, or audit, the OCMI has various opportunities to work with the company to bring the vessel into compliance without suspending or revoking the TSMS certificate as specified in § 138.305.

Commenters noted that proposed § 136.220 would require the original COI to be framed under glass and posted onboard the towing vessel. We received many comments noting that this requirement is outdated in this electronic age. These commenters suggested that the provision should simply state that a current copy of the COI must be on the



towing vessel and available for inspection. Some of them added that the original COIs should be kept in a central location.

In paragraph (b) of § 136.220 we provide the alternative of keeping the COI readily available onboard in a weathertight container. Our § 136.220 implements 46 U.S.C. 3312, which requires that the COI be displayed on the vessel but allows for alternatives as we have provided in § 136.220(b). We do consider an open boat as an example of when it is impracticable to post a COI, but we removed this example from the text of § 136.220(b) to place more focus on the statutory language. We require the original COI to be on board, rather than a copy, because there is only one original and removal of the COI from the vessel is one means the OCMI uses to prevent the vessel from getting underway if it is unsafe for it to do so.

We received one comment on proposed § 136.230(a) noting that the route endorsements on COIs issued to towing vessels should be consistent with the route designations on the COIs of the tank barges being moved.

The Coast Guard notes that routes on barges and towing vessels are not interdependent. The towing vessel and its tow is limited to the most restrictive route of the towing vessel or any vessel in the tow. The Coast Guard

encourages the company to match route-appropriate barges and towing vessels. However, we made no changes from the proposed rule based on this comment.

In reviewing § 136.235, which covers Certificate of Inspection amendments, we saw the need to distinguish procedures for a vessel seeking a COI amendment based on which option the vessel selected. We amended § 136.235 accordingly. We also added a provision stating that the OCMI may need to conduct an inspection before issuing an amended COI.

We received a comment on proposed § 136.235, suggesting that the term "towing vessel" should replace "vessel" in paragraphs (b) and (c)(2) of that section. This commenter also noted the same edit and other editorial changes for various sections throughout the proposed rule language.

The Coast Guard disagrees that there is a need to change every use of the word "vessel" to "towing vessel" when we mean towing vessel. As with § 136.235, where we initially use the term "towing vessel," and it is clear from the context that our use of the word "vessel" refers to towing vessel, we do not see a need to repeat "towing vessel." We have been careful to always use "towing vessel" when referring to a towing vessel in sections where

we also use the term "vessel" to mean something other than the towing vessel - e.g., in our definition of "bollard pull" in § 136.110.

Proposed § 136.240 addresses permission to proceed to another port for repairs. We received two comments expressing support for the provision. Another commenter suggested that the vessel should be able to proceed for repairs even if there is noncompliance with the COI.

The Coast Guard notes that under § 136.240, an owner or managing operator must notify the cognizant OCMI in whose zone the non-compliance occurs or is discovered before the vessel proceeds and also must notify any other OCMI zones through which the vessel will transit, and that the cognizant OCMI may require inspection of the vessel by a Coast Guard Marine Inspector or examination by a surveyor from a TPO prior to the vessel proceeding. We clarified § 136.240(a), which we intended to apply only to vessels with a TSMS, as the TSMS may address the necessary conditions under which the vessel may safely proceed to another port for repair. Accordingly, we amended paragraph (a), made corresponding amendments to paragraph (b), and inserted headings for all three paragraphs in § 136.240.

We received one comment that recommended changing "another port" to "next port of call," in § 136.240 and

confining the conditions requiring a Permit to Proceed to situations that affect safety or seaworthiness. Other commenters noted that the master, not the owner or managing operator, should be the person deciding if the trip for repairs can be completed safely.

The Coast Guard disagrees with these recommendations. The term "next port of call" may be too restrictive and may undermine the authority of the OCMI or the vessel's master in determining where the vessel may safely proceed to be repaired. Regarding the last comment, we do list "owner, managing operator, or master" when specifying who must make a judgment that the trip can be completed safely. We believe § 140.210(b) addresses the commenter's concerns by specifying that if the master believes it is unsafe for the vessel to proceed, he or she must not proceed until it is safe to do so. We have made no changes from the proposed rule based on these comments.

One commenter stated that in § 136.240 it appears that a company must notify the OCMI any time a vessel must be moved to accomplish a repair not specifically addressed in the TSMS. The commenter stated that to completely comply it seems that all possibilities must be addressed in the TSMS or the OCMI will be inundated with requests for a

problem not involving seaworthiness. We do not believe the commenter's characterization is accurate.

Companies using the TSMS have the opportunity to tailor their system to address conditions the company anticipates may occur that would cause the vessel not to be in compliance and the necessary conditions under which the vessel may safely proceed to another port for repair. Under § 136.240(b), if the condition is not addressed in the TSMS, the owner, managing operator, or master can request permission to proceed from the cognizant OCMI in whose zone the non-compliance occurs or is discovered. A Permit to Proceed would only be needed when a repair is needed and the vessel is no longer in compliance with its COI. Minor repairs that do not affect the safety of the vessel (including seaworthiness) or its machinery would most likely not be considered issues that would invalidate the COI, and therefore would not necessitate a Permit to Proceed. We have made no changes from the proposed rule based on this comment.

Proposed § 136.245 addresses permits to engage in an excursion. We received a comment pointing out that a permit to carry an excursion party is required when the towing vessel carries more persons than allowed by the COI,

but under proposed § 136.205, a COI indicates that minimum number of persons, not the maximum.

The Coast Guard notes that § 136.205 does not reflect all the information contained on the COI. The COI is a document issued under 46 U.S.C. 3309 that is in a form prescribed by the Commandant. Currently, it lists the minimum number of crew, those in addition to crew, and the total persons allowed on board. We have amended our description of the COI in § 136.205 to include "total persons allowed onboard." Separately, and upon reviewing proposed § 136.205 and a similar description in 46 CFR 2.01-5, we amended § 136.205 to improve its description of a COI's listing of safety equipment and appliances required to be onboard. Also, in further reviewing § 136.245 we saw the need to amend it to include the case where a vessel chooses the Coast Guard option or the TSMS does not address excursion parties.

Several commenters expressed the opinion that having guests such as vessel owners, service technicians, auditors, trainers, or crew changes for other vessels should not require a special permit. Other commenters opposed the proposed requirement to give 48 hours' notice to the OCMI because the need for an excursion party, such as customers or vendors on a towing vessel to see a

particular operation, will often arise spontaneously. One commenter was unclear where to obtain a permit. We received a comment requesting the addition of a provision to require the COI to identify the number of crewmembers and persons in addition to crewmembers allowed onboard, taking into account overnight accommodations, lifesaving equipment, etc.

The Coast Guard has added definitions for "excursion party" and "persons in addition to the crew" in § 136.110. Vendors/customers carried onboard would not constitute an "excursion party"; these individuals would be carried as "persons in addition to crew" as permitted by the COI. We also amended § 136.210 so that it prompts owners and managing operators applying for an initial COI to include documentation on the number of persons in addition to the crew they would like the OCMI to include in the COI.

We received one comment on the proposed requirement in § 136.250 for load lines for vessels operating outside the boundary line. The commenter questioned how the requirement applied to the Great Lakes, in which there are no boundary lines.

The Coast Guard notes that boundary lines are identified in 46 CFR part 7 and that load line requirements for the Great Lakes are provided in 46 CFR part 45. We

edited § 136.250 to make it clearer that it applies to all towing vessels on the Great Lakes, and also reorganized § 136.250 into a table for greater clarity.

G. Vessel compliance (Part 137)

We received numerous comments on part 137, and we made several changes to the overall structure and content of this part. In subpart A we removed the definitions section, as we have removed similar definition sections in other parts, because it simply noted that subchapter M definitions in § 136.110 apply to the part. We also deleted proposed § 137.115 because the substance of this provision is contained in § 136.210.

We received two comments on proposed § 137.120, which describes responsibilities for compliance. One commenter supported the provision that the owner and managing operator are responsible for ensuring compliance and suggested that when deficiencies and non-conformities are identified during vessel inspections and TSMS audits and fines imposed against a company, those action letters should be addressed to the person described in § 137.120, thereby ensuring the person at the top is fully aware of the vessel's conditional status.

The Coast Guard concurs that § 137.120 holds the owner and managing operator responsible for compliance with



subchapter M and other applicable laws and regulations. It also specifies that non-conformities and deficiencies must be corrected in a timely manner; we have deleted the stated purpose for this corrective action requirement because it was unnecessary regulatory text. We will consider the commenter's suggestion for where to send notification of non-compliance but see no need to change the regulations.

Under § 137.130(c), we leave discretion with the owner and operator to specify in the TSMS procedures for reporting and correcting non-conformities and deficiencies. We have reorganized § 137.130 to make it easier to read and understand the requirements of the two programs for compliance under the TSMS option.

Another commenter requested that standard forms be provided to assist small companies with compliance, and that the Coast Guard should provide guidelines to OCMI's for simple inspections of towing vessels operated by companies too small to have staff dedicated to regulatory compliance, and that the Coast Guard should provide standard forms similar to U.S. Army Corps of Engineers usage reports which can be submitted to the local sector OCMI.

Regarding the second commenter, the Coast Guard does not plan to prepare a specific form, but we have prepared a Small Entities Guide (available in the docket) for this

final rule and we do plan to provide guidance to OCMIs on implementing this rule. We will develop where necessary and appropriate inspection and compliance checklists, job aids, and guides for our OCMIs and make them available to the public. We made no changes from the proposed rule based on these comments.

We removed § 137.125 because it simply states that if a TSMS is applicable to the vessel it must have provisions for compliance with part 137. Section 137.125 is unnecessary because part 138 addresses what the TSMS must cover regarding all subchapter M requirements.

The new structure of this part, specifically in subparts B and C, presents together the discussion of inspections and surveys conducted under the both Coast Guard and TSMS options. As mentioned in the previous section of the preamble, we moved the discussion of inspections under the Coast Guard option from proposed §§ 136.150 and 136.165 into subpart B of this part. We also added a Coast Guard option section in subpart C of this part. In subpart C, we rearranged the order to place the discussion of drydock intervals first and then describe the Coast Guard and TSMS options. In response to comments we changed the term "periodic survey" to "external survey program" and the term "audit program" to "internal survey

program” throughout the rule, including in the headings for §§ 137.205 and 137.210. We also defined these terms in § 136.110 and added a reference to them in § 137.130.

An individual disagreed with the Coast Guard’s proposed 5-year inspection for vessels under TSMS. The commenter suggested that like vessels under SOLAS, an annual verification examination should be conducted.

In the NPRM, we did state that at the vessel level, towing vessels operating under the TSMS option would receive audits and surveys by a TPO, in addition to the Coast Guard conducting compliance examinations at least once every 5 years, along with additional random compliance checks based on risk (76 FR 49978, Aug. 11, 2011). While some vessels operating under a TSMS may be inspected by the Coast Guard once a year, we do not feel that annual Coast Guard inspections are necessary given the audit and survey requirements for vessels with a TSMS, along with our oversight of that system.

We received three comments objecting to the term “seaworthiness” proposed in § 136.150(a)(4), which we have reorganized into § 137.200. They noted that the appropriate term, especially for Western River towing vessels that don't go to sea, is “fit for the service for which it was intended” or “suitable for its intended

route.” A commenter noted that proposed § 136.150(a)(2) (now § 137.200(b)) would require a more detailed inspection if an inspector finds deficiencies or determines a major change has occurred, and recommended we set up boundaries on the open-ended term “deficiencies,” such as “deficiencies of sufficient number or severity,” and that we delete the “major change” provision.

The Coast Guard partially agrees with these recommendations. We consider “seaworthiness” to be an appropriate term for considering the condition of the vessel and note that the term is used in the Riverman’s Lexicon (Lehman), a noted publication specific to the Western Rivers. However, we have added a reference to fitness for route and/or service to further clarify the intent in the paragraphs where we use the term “seaworthiness”: §§ 137.200(d), 137.300(b), and 137.335(a)(1).

We define the term “deficiency” in § 136.110 to mean “a failure to meet minimum requirements of the vessel inspection laws or regulations,” and we do consider it appropriate to call for a more detailed inspection if deficiencies or a major change to the vessel are found. A major change would include a major conversion but would also capture other changes such as changes that may affect

the operational safety of the vessel or fitness for route or service.

A commenter asked us what constitutes a "visit" as opposed to an "inspection" or an "audit."

The Coast Guard may engage in visits to TPOs, as discussed in § 139.160, to ensure compliance with this rule. The Coast Guard notes that in the preamble of the NPRM we stated that, as part of our oversight of those organizations, we would conduct random oversight visits to the offices of TPOs that conduct TSMS audits and surveys. The Coast Guard also clarifies the procedures for such visits. The Coast Guard will provide notice to the employer 48 hours in advance of any site visit, unless the visit is in response to a complaint or other evidence of regulatory non-compliance (see § 139.160). In response to an earlier comment above, we have discussed the distinction between inspections and audits. We have made no changes from the proposed rule based on this comment.

One commenter expressed the opinion that annual and periodic Coast Guard inspections under proposed § 136.150 would overly tax the system and not effectively utilize Coast Guard inspection talent.

On page 32 of our Preliminary Regulatory Analysis and Initial Regulatory Flexibility Analysis (USCG-2006-24412-

0002) we assumed that 1,340 towing vessels from small companies with fleets of five or fewer vessels would select the Coast Guard annual-inspection option. Based on the many comments submitted about the benefits of a TSMS, we still anticipate that many owners and operators of towing vessels, particularly those from companies with large fleets, will select the TSMS option. The Coast Guard will closely monitor the demand for inspections and will make resource adjustments as necessary.

With respect to the periodic survey provision in proposed § 137.205, we received one comment favoring an audit by a third party every 3 years rather than every year.

The Coast Guard disagrees with this recommendation. We believe that 3-year intervals would allow unsafe conditions and other problems to go undetected for too long. The annual compliance activities are consistent with other classes of inspected vessels including those that implement other safety management systems. To clarify when the annual survey under § 137.205 must be conducted, we amended § 136.110 by adding a definition of "anniversary date" tied to the expiration date of the COI or TSMS certificate and we amended § 137.205(a)(3) by referring to the COI's anniversary date. We also amended other sections

that referenced anniversary issuance date to read "anniversary date."

We received one comment asking whether participation in an ISM program and issuance of a vessel's Safety Management certificate would meet the requirements in proposed § 137.210, which is now titled Internal survey program. Section 138.225 clearly states that ISM Code compliance meets the safety management requirements in this subchapter. To clarify our reference in § 138.225 to such vessels being deemed in compliance with "these" requirements, we amended § 138.225(a) in this final rule to replace "these requirements" with "TSMS-related requirements in this subchapter." This clarifying edit is consistent with our statement in the NPRM preamble that the Coast Guard is proposing to accept compliance with the ISM Code, an internationally mandated safety management system for vessels subject to the SOLAS, as satisfying TSMS-related requirements. We implemented the ISM Code through regulations in 33 CFR part 96 and view the processes and procedures in place for compliance with the ISM Code as sufficient to ensure that towing vessels comply with TSMS-related requirements in subchapter M.

This commenter also stated that proposed paragraph (e) of § 137.210 appeared to indicate the audit can be

conducted by the operating company since the OCMI may require the attendance of an approved third party. He asks if our intent is to allow the operator to conduct these audits in lieu of periodic (annual) audits by a third party.

Yes, it was our intent, which is reflected in this final rule, to allow operators to conduct some surveys and audits. We believe the commenter meant to reference paragraph (e) of § 137.215. Section 137.215 deals with conducting surveys and its paragraph (e) states that the OCMI may require the attendance of an approved third party "to assist with verifying compliance with this part." We deleted § 137.210(c) to remove the requirement that a towing vessel must successfully complete an initial audit by a TPO before it may be placed into an internal survey program. Section 137.210 contains the provisions that allow for owners and managing operators to conduct annual surveys under the internal survey program. For the purposes of auditing under the TSMS option, there is also an internal audit program described in part 138 that allows the owner or managing operator to conduct annual internal management audits. We note that we have amended § 137.210 by adding paragraph (a)(8) requiring that the TSMS contain procedures for assigning personnel to conduct surveys.



We received several additional comments on the provisions in proposed § 137.210. A few commenters suggested that "audit program" should be changed to "program of continuous assessment" and that the requirement in proposed paragraph (b) for timing of the surveys should provide that surveys may be conducted within 3 months of the anniversary date of the previous survey.

Section 137.210(b) specifies that the interval between successive surveys of any item must not exceed 1 year. The words "unless otherwise prescribed" at the end of that paragraph modify the reference to not being required to survey items as one event. The internal survey program allows the owner or managing operator to assess the required items through a series of surveys, resulting in maximum flexibility in conducting vessel operations while fulfilling regulatory requirements. We want to preserve the flexibility afforded to the owner or managing operator that was intended by the continuous survey aspect of the internal survey program, and view the 1-year-from-successive-survey requirement as the best means of assuring that required surveys under this flexible system are conducted. Therefore, we did not adopt the commenter's suggestion to amend § 137.210 to require that surveys be

conducted within 3 months of the anniversary date of the previous survey.

One commenter recommended that proposed § 137.210(a) (3) on identification of items that need repairs should allow for the issuance of Form CG-835 deficiency tickets.

The Coast Guard agrees that the list of items for inspection and repair should include any existing deficiencies listed by the Coast Guard on Form CG-835, Notice of Merchant Marine Inspection Requirements. We have amended § 137.210(a) (3) accordingly, and also added these related items: noted survey deficiencies, non-conformities, and other corrective action reports.

Noting actions listed in proposed § 137.210(d) (now § 137.212), which explains the OCMI's authority to require audits, surveys, and removal from the TSMS option, one commenter called for the Coast Guard to establish and use an industry advisory committee for each OCMI to advise him or her based on impartial industry knowledge. Another commenter recommended peer review to verify the quality of work performed by auditors.

The Coast Guard disagrees with the suggestion that we establish and use an advisory committee for each OCMI. The Coast Guard has established requirements for auditors to

ensure the competency of auditors in TPOs at 46 CFR 139.125 and 139.130. The Coast Guard retains oversight and administrative control of TPOs and through them, their auditors. See 46 CFR 139.135, 139.145, 139.150, and 139.160. We do not see the need for an additional level of review of their work. We developed these rules in coordination and consultation with TSAC, a Federal Advisory Committee whose members are appointed by the Secretary of Homeland Security to advise, consult with, and make recommendations to the Secretary on matters relating to shallow-draft inland and coastal waterway navigation and towing safety. Further, OCMIs work with Harbor Operations Committees and conduct regular meetings with port stakeholders and other industry representatives at the Sector level to discuss maritime issues, including those related to towing vessels. We made no changes from the proposed rule based on this comment, but we did clarify the reference to a "change in ownership" in proposed § 139.125(c)(4) (now § 139.125(d)(4)) that would cause an approval for a TPO to expire by inserting the words "as defined in § 136.110" after the term.

One commenter expressed concern about a lack of qualification requirements for the individual doing the surveys under the § 137.210 internal survey program, beyond

those written into the TSMS. He recommended that the rule require the individual conducting surveys under § 137.210 to have comparable qualifications to the third-party surveyor.

The Coast Guard has amended § 137.210 by adding paragraph (a)(8) requiring that the TSMS contain procedures for assigning personnel to conduct surveys. As suggested by the commenter, under § 138.220(c)(1) survey requirements must be specified in the TSMS. We have amended § 138.220(c)(1) to make it clear that the TSMS must list the minimum qualifications of a surveyor if the surveyor is not from a TPO. We also removed § 138.220(c)(3) and (e) because their proposed requirements are covered in elsewhere in § 138.220.

We received two comments on proposed § 137.215, which describes the general conduct of a survey. One commenter noted that proposed paragraph (b)(3) would require observation of drills and training, but periodic surveys are typically performed while the towing vessel is in drydock or on a railway, and crews are generally not on board.

The Coast Guard disagrees with the commenter's premise that periodic surveys under this subchapter will take place in a dry dock. At least portions of surveys under §

137.215 will require that the vessel is dockside or underway to complete adequate operational assessment of equipment contained in the scope of § 137.220.

However, the Coast Guard agrees with the commenter that a surveyor would not traditionally be expected to observe the performance of a drill by the crew. We have amended § 137.215 to reflect that the surveyor would focus on the vessel's structural, electrical, and mechanical systems, and equipment, including those used in drills - for example, davits, cranes, pumps, and lifesaving equipment. These functions could be performed while in drydock or without the crew present. It is the auditor who will focus on the operational performance of the crew to assess the competency in the performance of the assigned roles. For such an audit, the crew must be present and the vessel must be ready to demonstrate the performance upon request. The Coast Guard has amended §§ 138.405(d) and 138.410(c), conduct of internal and external audits, assigning auditors the responsibility to witness drills.

Another commenter requested a change to proposed paragraph § 137.215(c) which he felt created an unnecessary loophole. He recommended deleting it or revising it to read: "While all the items listed in § 137.200 must be surveyed for all vessels regardless of their condition,

vessels and equipment found to be in poor condition may be required to undergo more stringent examinations in order to satisfy the attending surveyor."

The Coast Guard agrees that § 137.215(c) should be amended to address this concern. We added language to § 137.215(c) to ensure that survey standards in § 137.215 are met and to require an expanded examination by the surveyor when he or she finds multiple deficiencies indicative of systematic failures. Regarding the items to be surveyed, § 137.215(b) clearly states that the survey must address all items in § 137.220.

We received several comments on the scope of surveys in proposed § 137.220. Some of the commenters focused on three requested changes: clarification that gas-freeing prior to entry into confined spaces, such as fuel tanks, is not required; allowing verification of drills to be done using a review of documentation; and limiting the inspection of watertight doors to those that were required to be installed.

As discussed in § 137.330(b), fuel tanks need not be cleaned out and internally examined if the general condition of the tanks is determined to be satisfactory by external examinations. While the Coast Guard does not agree that crew competency can be verified by just

reviewing records of required training and drills, we have removed the requirement for witnessing drills from the survey portion of the rule and have moved it to the audit requirements in §§ 138.405 and 138.410. Any watertight fittings that crews rely on for watertight integrity and vessel safety should be operational and subject to survey.

One commenter noted that § 137.220 should be amended to clarify that a topside exam can be conducted in segments and need not be done as a discrete event.

Section 137.220 describes the scope of the survey which would apply under either the § 137.205 or § 137.210 program. For those choosing the § 137.210 internal survey program to demonstrate vessel compliance, the Coast Guard makes it clear in § 137.210(b) that the owner or managing operator is not required to survey the items as described in § 137.220 as one event, but may survey items on a schedule over time, provided that the interval between successive surveys of any item does not exceed 1 year, unless otherwise prescribed. The Coast Guard believes that § 137.210(b) provides clear guidance that an owner or managing operator of a towing vessel may select to have surveys done during multiple events. In contrast, the § 137.205 external survey program calls for one event, an annual survey, and not successive surveys to survey the

items described in § 137.220. The Coast Guard has not made any changes from the proposed rule in response to this comment.

Another commenter recommended that we eliminate the term "rescue boat" from the rule, which we used in proposed § 137.220(g)(6) when identifying the scope of items to be examined and also in crew safety regulations in part 140 of the NPRM. He notes this change would avoid confusion between the terms "skiff," "survival craft," and "rescue boat."

The Coast Guard agrees that the use of the term "rescue boat" in this rule could cause confusion. We did not propose that subchapter M require towing vessels to carry rescue boats, so to avoid confusion, we have removed the references to rescue boats in §§ 137.220 and 140.405. We did, however, leave instruction and drill requirements in § 140.420(d)(4) for launching and using a rescue boat if a towing vessel has one installed, and have defined rescue boat as described earlier in this preamble.

One commenter objected to a § 137.220(g) requirement for towing vessels to conduct a man-overboard drill, simulated under emergency conditions. The commenter noted that towing vessels on the Great Lakes should not have to comply with standards not applied to "self-propelled



lakers" , that is, other self-propelled vessels, on the Great Lakes.

The Coast Guard disagrees and did not make a change from the proposed rule based on this comment. We seek to promote safe vessel operations for all towing vessels and we have casualty data that indicates that falls overboard is one of the main contributing factors to crew member fatalities in this industry. As detailed in § 136.105, the Coast Guard has provided a number of exceptions for towing vessels based on the known risks involved in their specific operation. The Coast Guard has declined to provide blanket exemptions for entire operating areas such as lakes, bays and sounds, rivers, or as the commenter suggests, the Great Lakes. The Coast Guard has evaluated the hazards of towing vessel operations in each of these particular areas and determined that the application of these regulations to certain towing vessel operations in each of these areas would improve safety to life, property and the environment.

In addition, noting the language currently in 33 CFR 164.01(b) and the "33 CFR Part 164, if applicable" language in proposed § 137.220(j)(5), a commenter raised concerns about determining when and whether a given towing vessel is subject to 33 CFR part 164 navigation safety regulations.

We did not propose to amend 33 CFR part 164, and neither § 164.01 nor other sections in that part use “inspected” or “uninspected” as criteria for applicability, so this rule does not alter the applicability of 33 CFR part 164 for towing vessels. To see what requirements in 33 CFR part 164 may apply to a given towing vessel, one needs to review all of § 164.01, not just paragraph (b) which is focused on towing vessels. For example, § 164.01(d) points to automatic identification system requirements without reference to type of vessel. We made no changes from the proposed rule based on this comment.

We received two comments on proposed § 137.300, a section on documenting compliance with drydock and internal structural surveys requirements. One of these commenters referenced § 136.130(d) in combination with § 137.300 when requesting clarification about the scope and frequency of such surveys. Both § 136.130(d) and redesignated § 137.300(a) make it clear that the frequency does not change based on which option is chosen to obtain a COI. Further, we amended § 137.300(a) to clearly indicate that the drydock and internal structural intervals start after the issuance of the initial COI. Paragraphs (a)(1) and (2) of § 137.300 clearly state the intervals for drydock and internal structural surveys. Finally, we established

separate sections for vessels using the TSMS option (§ 137.305) and those using the Coast Guard inspection option (§ 137.302) to document compliance with drydock and internal structural survey requirements.

Regarding the scope of drydock and internal structural surveys, whether a vessel provides objective evidence using the external survey option under § 137.310 or the internal survey option under § 137.315 requirements (see these options referenced in redesignated § 137.305(a) and (b)), the scope of the survey is clearly laid out in § 137.330. Also, § 137.325 contains a comprehensive inventory of items to be reviewed during the examination. The Coast Guard believes that the numerous items identified in § 137.325, in addition to the supporting § 137.330, provide sufficient information to address the commenter's concerns. As noted above, redesignated § 137.300 makes clear that regardless of the option chosen to obtain a Certificate of Inspection, each towing vessel must undergo a drydock and internal structural examination at the prescribed intervals after the issuance of the initial COI. Accordingly, we have amended the § 137.325 heading so that it no longer references just surveys for the TSMS option. Throughout amended subpart C of part 137 we have changed the term

"survey" to "examination" when referring to the drydock and internal structural examinations.

A person commenting on proposed § 137.300(c), which called for objective evidence of compliance with certain load line requirements in subchapter E, noted that load lines are not applicable to inland towing vessels. We agree that load lines are not applicable for situations where the inland towing vessel never operates on the Great Lakes or outside the Boundary Lines. But under § 136.250, the load line requirement in subchapter E would apply to certain towing vessels 79 feet or more in length that normally operate on inland waters but that sometimes operate on the Great Lakes or outside the Boundary Lines. In this final rule, we moved requirements for documenting compliance with load line and other requirements in this subpart to § 137.305 for vessels choosing the TSMS option and to § 137.302 for vessels choosing the Coast Guard inspection option. We recognize that 46 CFR 42.03-5(b)(1)(v) in subchapter E excepts vessels that operate exclusively on inland waters and that do not engage in coastwise or Great Lakes voyages from load line requirements. However, § 137.305(c) and amended § 137.320 make clear that the load line provision is only relevant for towing vessels subject to subchapter E load line

requirements. Similarly, the provisions in new § 137.322 for vessels currently classed by a recognized classification society whose applicable rules have been accepted by the Coast Guard, are only relevant to vessels so classed.

Redesignated § 137.305 clarifies that objective evidence is needed to demonstrate that a vessel utilizing the TSMS option complies with the drydock and internal structural examination requirements of this subpart. Paragraph (c) points to §§ 137.320 and 137.322. We amended § 137.320 to make clear that an examination performed to maintain a valid load line certificate issued in accordance with subchapter E would count as an examination required under § 137.300. Also, new § 137.322 allows for the same consideration in the case of a drydock and internal structural examination performed to maintain class by a recognized classification society whose applicable rules the Coast Guard has accepted. In the case of those vessels required to conduct two drydock and internal structural examinations in accordance with § 137.300(a)(1), the allowance under either § 137.320 or § 137.322 only counts for one of the required examinations.

We received several diverse comments on proposed §137.305, which specifies intervals for drydock and

internal structural surveys. One commenter observed that towing vessels operate in an environment that requires them to be in contact with barges and vessels, and that this contact puts unusual stresses to the hull. Based on this observation the commenter suggested that the survey intervals called for in proposed § 137.305(a)(2), redesignated § 137.300(a)(2), for vessels not exposed to salt water often should be the same as those with more saltwater exposure - at least twice every 5 years and not more than 36 months between drydockings - instead of just once every 5 years.

The Coast Guard disagrees. The drydock and internal structural examination requirements in this final rule are consistent with the requirements for other vessels subject to inspection, and we see no reason to believe this frequency of drydocking would need to be increased for towing vessels. The Coast Guard will monitor the inspected fleet to see if increased frequency is called for in the future. As discussed earlier, proposed § 137.305 has been redesignated as § 137.300 in this final rule.

Some commenters thought the provision of proposed § 137.305 should be amended to ensure vessels operating on the Great Lakes may receive a 1-year extension on the required interval for drydocking and interval structural

examinations as provided under load line provisions in 46 CFR subpart 42.09 and current Coast Guard policy.

The Coast Guard disagrees that modification to our applicable text, now found in § 137.300, is needed. The extension of a Great Lakes Load Line certificate by the Ninth District Commander is addressed in 46 CFR 42.07-45(d)(2). Existing Coast Guard policy, found in the Marine Safety Manual, Volume II, provides additional guidance to the Coast Guard and industry regarding extensions of drydock and internal structural examinations for Great Lakes vessels. The Ninth District Commander is also the approving authority for drydock extensions for these vessels, including towing vessels operating on the Great Lakes. While the same entity can issue both of these extensions, the load line certificate and the vessel's Certificate of Inspection must both be annotated with the new due date for the vessel's drydock and internal structural examination. We made no changes from the proposed rule based on this comment.

Some commenters noted that a definition for "saltwater" is needed if the times of operation in "saltwater" is a factor in determining intervals for inspections.

The Coast Guard did not add a definition for the term "saltwater" in the rule. The Marine Safety Manual, Volume II, places the responsibility of determining salt water and fresh water dry-docking and internal structural inspection intervals on the OCMI. If fresh water intervals are determined appropriate for a specific vessel, the OCMI will annotate the fresh water service intervals on the vessel's COI and evaluate that determination periodically. OCMI's maintain lists of boundary lines where fresh water ends, and salt water begins, within their particular zones.

A commenter expressed concern about the cost of the requirements. He wrote that proposed § 137.305 would impose enormous cost on small businesses, and that his company's vessels that operate in the Southeast in a saltwater environment would have to be drydocked twice every 5 years at an estimated cost of about \$40,000 for each drydocking evolution for one vessel, or \$80,000 per vessel every 5 years. Another commenter suggested that § 137.305, requiring drydocking of saltwater vessels twice every 5 years, would cost his company at least \$100,000 to \$150,000 per vessel.

The drydock and internal structural examination requirements in this final rule are consistent with the requirements for other vessels subject to inspection and



necessary to meet the statutory requirements for vessel inspections. We have made no changes from the proposed rule based on this comment.

With regard to the cost of drydocking, after publication of the NPRM, the Coast Guard sponsored a study of standard marine engineering services for use in regulatory analyses, titled "Study of Marine Engineering and Naval Architecture Costs for Use in Regulatory Analyses" by ABS Consulting, available on the docket. According to the Engineering Cost Study, cost of drydocking can vary based on a variety of factors, including vessel size, vessel weight, equipment, type of work, operating environment and location of the drydock.<sup>2</sup> The Engineering Cost Study summarizes the minimum, average and maximum costs of drydocking for various vessel types in Table 6-9, page 32. The Engineering Cost Study does not report a separate cost category for towing vessels. The Coast Guard uses the costs for smaller Freight Ships and Industry Vessels as a proxy for towing vessels based on similar size and operating characteristics. Based on the Engineering Cost Study, the minimum cost for a drydocking of a towing or similar vessel is \$2,000, the maximum is \$20,000 and the

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<sup>2</sup> Source: ABS Consulting for the U.S. Coast Guard, Study of Marine Engineering and Naval Architecture Costs for Use in Regulatory Analyses, March 29, 2013, Contract GS-23F-0207L2714803, page 30.

average is \$9,250. We consider the \$9,250 as the best available estimate for the average cost of drydocking. We acknowledge that the \$40,000 estimate provided by the commenter is feasible given the variability of factors, such as size and location. To account for the variability, we assume that the \$40,000 cost is at the 90<sup>th</sup> percentile of the distribution of costs, that is, 10 percent of vessels will incur this cost for drydocking. As a result, we modify the average cost to reflect the upper 10<sup>th</sup> percentile cost of \$40,000, for a weighted average cost of \$13,250. As per the regulatory requirements, vessels that are not currently covered by a safety management system are assumed to incur this cost once every 5 years for freshwater vessels and twice every 5 years for saltwater vessels.<sup>3</sup> For a more detailed discussion of the costs, see section 3.3 of the Regulatory Analysis which is available in the docket.

We received a few comments on proposed § 137.315. Some commenters were unclear whether the requirement of notification prior to commencing work at the drydock refers to any drydock work or only those drydock visits that are required by the TSMS.

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<sup>3</sup> Vessels currently covered by an SMS already are required to undergo drydocking at similar intervals.

In response, we amended § 137.315(d) to clarify when to notify the Coast Guard under paragraph (d) and TPOs under paragraph (b) of activities related to credit drydocking or internal structural examinations.

A few commenters asked that § 137.315 be modified to clarify that the items described in § 137.330 need not be examined as one event, but may be examined on a schedule over time.

Section 137.315(c) states that "The interval between examinations of each item may not exceed the applicable interval described in § 137.300." The Coast Guard believes the words "examinations of each item" provides clear guidance that an owner or managing operator of a towing vessel may select to survey different items described in § 137.330 during multiple events, and the remainder of § 137.315(c) makes clear that the interval for surveys of a given item must not exceed the applicable interval described in § 137.300.

Several commenters argued that proposed paragraph (a) of § 137.325, requiring a surveyor to determine that the hull and related structure and components are free of defects or deterioration, would be too difficult to meet. One commenter suggested language we used in proposed § 137.335(c) (3) regarding underwater inspections - "free from

appreciable defects and deterioration" - stating that it does not make sense to require a higher standard for a vessel on drydock than one being inspected in the water.

The Coast Guard agrees with the commenters with respect to the term "free of defects [and] deterioration." We have amended § 137.325(a), to remove the term "free of" and have further rearranged the paragraph so that the standard for evaluating the listed items detected in the hull and related structure and components is whether they "adversely affect the vessel's seaworthiness or fitness or suitability for its route or service" instead of "reducing effectiveness." Also, in § 137.325(a), we changed "determine that" to "determine whether" to better reflect the purpose of the survey: to determine if standards are met. In response to the second comment, the Coast Guard amended § 137.335 by removing the word "appreciable" to provide a more consistent standard with that of § 137.325(a), and by reorganizing the section to better clarify its intent.

Two commenters expressed general opposition to the proposed requirements and scope for regular mandatory drydock examinations. One commenter stated that harbor service boats are already being retired on a regular basis when their structural usefulness is at an end, and

therefore mandatory structural inspections are not warranted. The commenter also noted the cost of additional boats to fill the service void when these boats are in transit to a certified inspection drydock and when undergoing a drydock inspection. Another commenter was specifically concerned that proposed § 137.330 was vague regarding pulling the tail shafts for inspection.

Because of the nature of towing, the hulls of towing vessels are exposed to the unique hazards that result in degradation and damage to the towing vessel in the normal course of operation. For this reason, regular drydocking of a towing vessel to inspect its underwater areas is a necessary component of assessing and verifying fitness for service. We note, however, that as proposed in the NPRM, § 137.335 in this final rule identifies situations where it may be acceptable to conduct an underwater survey in lieu of a drydocking.

The Coast Guard notes that scope of drydock examination required by § 137.330 is the same for both seagoing and inland service. The Coast Guard believes § 137.330 clearly lays out the scope of the required drydock examination for all towing vessels subject to subchapter M. Our proposed definition of "drydock" in § 136.110 actually defines a drydock examination (as opposed to the physical

dock) and matches the definitions of that term in subchapters K and T, so we amended the term being defined to "drydock examination."

Regarding examination of tail shafts, the Coast Guard proposed § 137.330(a)(2) to permit the surveyor or inspector to conduct the required examinations using different means than pulling the tail shaft, so long as the method used allows the surveyor or inspector to properly evaluate the tail shaft for bends, cracks, and damage. These methods may include technologies such as non-destructive testing and x-ray. The Coast Guard has not made any changes from the proposed rule based on these drydocking and tail shaft comments.

Regarding the cost of additional boats to fill the service void when these boats are in transit to a certified inspection drydock and when undergoing a drydock inspection, the Coast Guard has added an estimate of lost revenues (rather than the cost of replacement) to account for the potential impacts of vessels being out of service due to drydock inspections. Further information is available in Section 2.5 of the Regulatory Analysis.

We received a few comments on § 137.335, which sets out provisions for an underwater survey in lieu of drydocking. One commenter expressed support for the

provision. One commenter suggested that for purposes of determining whether an underwater survey is appropriate, the age of the hull should be used rather than the age of the towing vessel.

The Coast Guard does not agree that we should use the age of a given vessel's hull as opposed to the vessel's age when considering eligibility for enrollment in an underwater inspection in lieu of drydocking (UWILD) program. For an existing vessel with no prior credit drydock overseen by the Coast Guard, we have no criteria to make an "age of hull" determination. Once inspected, a completely new hull will likely be considered as a major modification and reset the vessel's age for purposes of UWILD enrollment.

While we did not make a change from the proposed § 137.335 based on these comments, we did amend § 137.335 to clarify the process for the UWILD program by stating that it is the Coast Guard that determines if the stated criteria for eligibility has been met.

One commenter opposed several vessel compliance provisions in part 137. He argued that requirements for training and recordkeeping will be an excessive burden on small companies, a distraction to pilots, and cause undue hardship for vessel owners; that vessel managing operators

should not have to get permission to put visitors, company representatives, or additional personnel on the vessel; and that restrictions in routes permitted on the COI would be a deterrent to his ability to make a living and provide employment for his personnel. Other commenters noted that the paperwork requirements would distract pilots while they are steering their towing vessels.

The Coast Guard views the TSMS, and its requirements for records to document compliance with regard to training, as the foundational document itemizing the standards, processes and management systems necessary to improve maritime safety aboard towing vessels. Towing companies that lack the resources to develop and implement a TSMS may choose the Coast Guard inspection option and will not have to maintain the TSMS-required records and documents. We note, however, that personnel record requirements in § 140.400(a) and (b) apply to all vessels subject to subchapter M; in response to this comment we have made clarifying amendments to those paragraphs. With respect to associated paperwork, many of the entries are short in duration and the Coast Guard does not mandate when the paperwork is filled out.

Regarding crews and visitors, the Coast Guard will issue certificates of inspection that establish the level



of manning and persons in addition to the crew that will be allowed to be on board the vessels. Companies should work with OCMI's prior to issuance of the COI to request any additional personnel above what the required manning level would normally be. The Coast Guard does not agree with the commenter's assertion that the OCMI does not need to be contacted to carry additional personnel (visitors, company reps, etc.) beyond what is stated on the COI. We note that § 136.245 provides for the issuance of an excursion permit by the OCMI as needed.

The application for inspection allows owners and managing operators to request the routes necessary to accomplish their business. OCMI's will evaluate that request to determine if the vessel meets the standard for the routes being requested. Those standards are found in parts 140 through 144. We made no changes from the proposed rule based on these comments.

One maritime company expressed concerns regarding added operating costs incurred that will stem from drydock inspection fees paid to surveyors or the Coast Guard, and from audit exams and what the maritime company considers unnecessary repairs brought upon the industry by non-risk-based regulations.

The requirement to have a surveyor from a TPO conduct a drydock and internal examination is predicated on the option chosen to obtain a COI. The Coast Guard encourages the owner or managing operator of a vessel using the TSMS option to discuss such costs with the company's TPO, as appropriate.

One commenter predicted the cost of surveys would likely increase for both small and large companies, citing the demand for Coast Guard-approved surveyors from TPOs and the increased scope of surveys. He noted many common repairs that can now be performed without requiring independent surveys will require independent surveys under this rule.

The Coast Guard does not accept the premise that this rule imposes a requirement that independent surveyors must be involved before common repairs are performed. Regarding repairs, under § 137.305, the OCMI may require additional examination of a vessel whenever he or she discovers or suspects damage or deterioration to hull plating or structural members that may affect the seaworthiness of a vessel. We believe the OCMI should be able to require additional examinations when he or she discovers such conditions, and we note that such examinations are typically reserved for those dry-docking and topside

surveys required by part 137. We note also that under §§ 137.135(a)(12) or 137.210(a)(3) there is a requirement to identify items that need to be repaired or replaced before the vessel continues in service, but this would not require a TPO survey before common repairs could be made.

Regarding the need for surveyors from TPOs, under the Coast Guard option, annual inspections are performed by Coast Guard personnel and do not require participation of a surveyor from a TPO. Similarly, if a company has a TSMS and chooses an internal survey program, the surveys can be conducted by a qualified member of the company and would not require a TPO. If a company with a TSMS uses the external survey program, they would incur additional costs of using a surveyor from a TPO.

#### H. Towing Safety Management System (TSMS) (Part 138)

We received many comments on our proposed part 138 TSMS requirements. We received several comments with regard to the schedule for the TSMS option. An individual suggested that the implementation of a TSMS should occur immediately with the allowance of a 6-month interim certificate. This commenter stated using an interim basis approach, as is done with the ISM Code, will prevent reinventing the wheel and align the system approach to existing requirements.

We have made a number of changes, as explained in this section to provide for a smooth implementation of the TSMS option while keeping in mind the burden to owners and managing operators. In the NPRM, we proposed that owners and managing operators who select the TSMS option would have 2 years from the effective date of a final rule to create their TSMS, have a TPO approve it and then issue a TSMS certificate. The owners and managing operators would then have 4 years from the date of that TSMS certificate to bring all vessels under their ownership or management into the TSMS and obtain COIs for them.

In this final rule, we changed § 138.115 so that owners or managing operators of towing vessels need only to obtain a TSMS certificate issued under § 138.305 at least six months before being able to have any of their vessels obtain a Certificate of Inspection under the TSMS option. We made this change to better account for the time needed for third parties to obtain approval from the Coast Guard and for owners and managing operators to obtain approval of their TSMS from these third parties before being required to have their vessels obtain a COI. We also believe that six months of implementing a TSMS is sufficient for obtaining a COI, and as required, the vessel would need to have on board a copy of the owner or managing operator's

TSMS certificate. We amended § 138.115 to more closely align the deadline with the deadlines for vessels to obtain a COI, but this change does not prevent a company from implementing a TSMS sooner and we encourage owners and managing operators to obtain the TSMS certificate and implement their TSMS as soon as possible. In making this change, we do not believe there is a need for a 6-month temporary certificate.

Two commenters expressed their view that utilizing internal and follow-up audits would mean that there would be no need for a TSMS.

The Coast Guard does not agree that merely conducting audits and surveys would negate the need for TSMS. The TSMS is the foundational document itemizing the standards, processes, and management systems that the auditor would review, assess, and validate. Without a TSMS, or some other form of Safety Management System, there would be no documentation to identify the processes and management system(s) put in place for a vessel choosing the TSMS option. We made no changes from the proposed rule based on these comments.

We received comments from maritime companies and a professional association suggesting that proposed §§ 138.205, 138.210, 138.215, and 138.220 pertaining to the

purpose, functional requirements, and elements of the TSMS be revised to be more simplistic and to more clearly state the primary goals of a TSMS.

We believe the purpose, objectives, functional requirements, and elements presented in these four sections in part 138, subpart B, succinctly establish reasons for, and the requirements and goals of, a safety management system. The Coast Guard incorporates these core elements to provide consistency with the ISM Code and to identify the elements that must be addressed when developing a TSMS. In response to a previous comment, we did revise our definition of "safety management system," which identifies the nature of an SMS and who it enables to effectively implement the safety and environmental protection requirements of subchapter M. Additional guidance will be developed to help the industry and public understand the goals of a TSMS and how to develop and implement one.

Some commenters requested clarification regarding the proposed functional requirements in § 138.215(f) and TSMS elements in § 138.220(e) related to the phrase "procedures to manage contracted (vendor safety) services." The commenters suggested that the management of all hired (contracted) towing vessels to ensure they comply with subchapter M would be a burden, and they suggested that

proof of the hired company's TSMS and vessel's COI should be sufficient evidence to meet the intent of the rule. One of the commenters stated that it is unclear what contracted services are covered by § 138.220(e).

The Coast Guard agrees. When contracting their vessels to others for towing services, the owner and operator remain responsible for verifying that their vessels are in compliance with the regulations. We have removed the requirements proposed in §§ 138.215(f) and 138.220(e).

We received several comments from maritime companies that conveyed concern regarding the proposed requirement in § 138.220(b)(1) for employers to, "ensure personnel are... mentally capable to perform required tasks." The commenter's stated that although employers conduct drug testing, safety training, and physical examinations, the employers cannot be responsible for determining their mental health status.

The Coast Guard agrees that it may be unreasonable for the company to determine the mental health of a crewmember. It is reasonable, however, for companies to identify if potential crew members are able to perform required tasks. For this reason, we have edited the quoted language in § 138.220(b)(1) to require the TSMS to contain employment

procedures which ensure "that personnel are able to perform required tasks."

We received a comment requesting more details regarding crew member (master, mate, able seaman, pilot, etc.) responsibilities in the operation, managing, and implementation of the TSMS and the vessel.

The Coast Guard does not agree that the regulations should contain more details on crew responsibilities and believes that this should be left to the discretion of the owner or managing operator to set in the TSMS. Under § 138.220(b), policies must be in place in the TSMS that cover the owner or managing operator's approach to managing its personnel, including the duties and responsibilities of the crewmembers.

We received comments from individuals and a maritime company recommending that the rule ensures that major non-conformities, non-conformities, accidents, and hazardous situations are reported to the owners, company, or managing operators; are investigated and analyzed with the objective of improving safety and pollution prevention; and that auditors notify the Coast Guard and the company immediately of any serious, unsafe situation that threatens the vessel, its personnel, or the environment. One commenter noted that TSMS requires a designated person to whom crewmembers



can report safety violations, but that towing vessels opting for the Coast Guard inspection option would not have this reporting system that would likely prevent accidents. Another commenter recommended supplementing the text in § 138.220(a)(1)(ii) to ensure that the designated person monitors the safety and pollution prevention aspects of the operation of each vessel and ensures that adequate resources and shore-based support are applied.

With respect to reporting accidents and non-conformities, we note that § 138.215(c) requires TSMSs to include procedures for reporting both. Section 138.220(a)(2)(ii) requires that the TSMS include procedures to identify and correct non-conformities. The TSMS must include how an initial report should be made and the actions taken to follow up and ensure appropriate resolution.

For vessels choosing the Coast Guard option the corresponding "designated person" is the vessel's Master. In part 140 on operations, § 140.210(d)(6) requires the crew to report unsafe conditions to the Master and take the most effective action to prevent accidents.

The Coast Guard disagrees with adding specific regulatory text to § 138.220(a)(1)(ii) regarding the designated person. Section 138.220(c) requires the TSMS to

have an element that addresses verification of vessel compliance that covers the safety and pollution prevention aspects that the commenter alluded to. Ultimately the designated person is responsible for ensuring the TSMS is implemented and continuously functions to address concerns identified by the commenter.

On the issue of protecting the responsibilities and authority of masters, we received comments suggesting that the TSMS specifically states that the master has overriding authority to make decisions regarding the company's safety and pollution prevention.

The Coast Guard agrees that the master of a towing vessel has overriding responsibility and authority to ensure the safety of his or her vessel. As stated in § 138.220(a)(1)(iii), the Master's authority, as defined by the owner or managing operator in the TSMS, must provide for his or her ability to make final determinations on safe operations of the towing vessel including the ability to cease operations if an unsafe condition exists. This reflects provisions in operational regulation § 140.210 which specify that safety of the towing vessel is the responsibility of the master and that if the master believes it is unsafe for the vessel to proceed, he or she must not proceed until it is safe to do so.

We received many comments from maritime companies that recommend that the Coast Guard accept the AWO RCP as an approved TSMS. Commenters wrote about the wide use of the RCP and attested to the success that their company has experienced implementing that program. Several commenters also suggested that because AWO RCP has been developed from the ISM code, which we already noted as being accepted in the NPRM, the AWO RCP should qualify as an approved TSMS.

The provisions of § 138.225 state that an SMS that is fully compliant with the ISM Code requirements of 33 CFR part 96 will be deemed in compliance with TSMS requirements in part 138. It also states that the Coast Guard may consider other existing safety management systems as meeting part 138 requirements. The Coast Guard will examine AWO's RCP to determine whether or not it meets the requirements of 46 CFR part 138 in order to determine if it qualifies under the provisions of this section. We have not made a change from the proposed rule based on these comments.

We received comments from several maritime companies that recommended the sequence of events for the issuance of a COI for towing vessels be provided.

The Coast Guard notes the following short sequence of events associated with the various ways to obtain a COI:

Step 1: As specified in § 136.210, Obtaining or renewing a Certificate of Inspection (COI), the owner or operator must submit a completed CG-3752, Application for Inspection of U.S. Vessel, to the cognizant OCMI. As noted in § 136.130(d), the applicant must specify the option -- TSMS or Coast Guard Inspections - when submitting the Application for Inspection for a vessel.

Step 2: Under § 136.212, the Coast Guard will inspect the vessel at least once every 5 years for certification.

Step 3: As specified in § 136.212(c) of this final rule, the OCMI will issue a vessel a new Certificate of Inspection after the vessel successfully completes the inspection for certification.

With respect to this process, and as noted previously, we amended § 138.115 so that owners or managing operators of towing vessels selecting the TSMS option need to obtain a TSMS certificate at least six months before being able to have any of their vessels certificated. We believe this is more consistent with the required schedule of when vessels must obtain a COI as shown in § 136.202 when considering the time needed for third parties to obtain Coast Guard approval and for owners and managing operators to obtain approval of their TSMS from the third parties.

Five maritime companies suggested that additional language be provided in § 138.305 to clarify how a third-party is to respond when a non-conformity is discovered and what the appeals process will be for a company whose certificate is rescinded.

The Coast Guard agrees and has added language to § 138.505(a) to specify that the results of any external audit of the owner or managing operator's compliance with § 138.315 of this part must be submitted to the Towing Vessel National Center of Expertise within 30 days of audit completion by the TPO conducting the external audit. Further, we amended our definition of "non-conformity" in § 136.110 to clarify that it is referring the non-fulfillment of a safety management system specified requirement. On reviewing proposed § 138.215(j) procedures for evaluating recommendations, which has been redesignated as § 138.215(i), to be more consistent with other quality control and safety management systems, we amended its reference to the source of the recommendations to include more company personnel, and made a similar edit in § 138.220(a)(2)(ii) regarding reporting non-conformities.

Regarding the appeal process, in proposed § 136.180 we stated that any person directly affected by a decision or action taken under this subchapter by or on behalf of the

Coast Guard, may appeal in accordance with subpart 1.03 in subchapter A of this chapter. In response to comments, the Coast Guard has added § 1.03-55 to identify the Coast Guard official or entity appeals should be directed to, including the appeal of matters relating to action of a third party, such as when a TPO rescinds a TSMS certificate.

A professional association noted that, as written, proposed § 138.305 would require that all towing vessels in a fleet that are in compliance with the TSMS be included on the company's TSMS certificate. The commenter stated that this provision would render an entire fleet invalid if a TSMS is revoked under proposed § 138.305(d), and therefore, a paragraph needs to be added to this section detailing the appeals process for the rescinding of a TSMS, which mirrors the current Coast Guard appeals process for rescinded COI's. One commenter suggested that the proposed requirement in paragraph (c) to list vessels on a TSMS certificate is cumbersome and unnecessary.

The Coast Guard understands the commenter's concern and has amended § 138.305, so that owners or managing operators need only maintain, and produce on request, a list of vessels currently covered by each TSMS certificate. This is a less burdensome means of requiring this information.

Exceptional circumstances such as failure to complete a required audit, major non-conformities discovered during an audit or survey, and failure to fully implement their TSMS could render the TSMS certificate invalid for a company's entire fleet. Based on the Coast Guard's experience with other safety management systems, including ISM, these circumstances have been rarely observed. It is more likely that an infraction of the regulations would result in a less drastic response - for example, in the form of non-conformities being reported for the one or few vessels involved, or those vessels being removed from the list of vessels found to be in compliance with the TSMS.

If the situation warrants, the TPO that issued the TSMS certificate is able to rescind the certificate, which could impact the entire fleet, or remove one or more vessels from the list of vessels on the TSMS for non-compliance with the requirements of part 138. Such an action that would render the certificate no longer valid would indeed impact the entire fleet of vessels listed in that TSMS certificate. Also, we note that the Coast Guard may suspend or revoke the TSMS certificate at any time for non-compliance with the requirements of part 138. As discussed above, we have added 46 CFR 1.03-55 to clearly identify the Coast Guard official or entity appeals should

be directed to for those seeking to appeal a decision by a TPO under § 138.305(e) to rescind, or a Coast Guard official under § 138.305(d) to suspend or revoke, a TSMS certificate.

In commenting on § 138.305(f) requirements, an individual suggested it is unnecessary for a copy of the TSMS certificate to remain onboard the vessel because the certificate will be on file at the Captain of the Port (COTP) and at the company's office.

The Coast Guard does not agree. Some towing vessels will frequent a number of COTP zones. The TSMS certificate provides evidence that a vessel covered by the TSMS was found to meet 46 CFR part 138 requirements, and a copy on board the vessel will be readily available to Coast Guard officials wherever the vessel is operating.

A transportation company suggested that two certificates should be issued instead of one: a Towing Company Safety Management System Certificate to the office and a Towing Vessel Safety Management System Certificate to each towing vessel. One commenter recommended and provided text for a new section that would provide information on how to obtain such certificates.

The Coast Guard does not agree. A TSMS is intended to be the central document that directly links the towing



vessel and the shore-based management operation. The TSMS is not only for the vessel or only for management. Rather, it is the documentation of processes, responsibilities and required action defining the mutually supporting actions between the vessel mariners and management. A TSMS certificate should be the only document issued attesting to the acceptability of the system. This should reduce the paperwork burden on industry and TPOs.

We received comments suggesting the removal of the proposed requirement for an internal auditor to be a person outside of the organization. Commenters felt that this requirement could make it difficult for small companies to comply. Others suggested that a person who is involved in the development of the TSMS would be useful in identifying areas where the system is not meeting standards. Several comments from maritime companies felt that the requirements for internal auditors should mirror ISM Code 12.4, which states that "Personnel carrying out audits should be independent of the areas being audited, unless this is impracticable due to the size and the nature of the Company."

The Coast Guard believes that some of these comments are based on a misreading of § 138.310. The section does not require an internal auditor to be a person outside of

the organization. However, to come closer to the desired objectivity of a third-party organization, the internal auditor may not be a person involved in the implementation of the TSMS. In response to these comments on § 138.310, the Coast Guard has amended § 138.310(d)(4) to include qualifying language from ISM code 12.4: the auditor must be independent of the procedures being audited, unless this is impracticable due to the size and the nature of the organization. Thus, very small organizations may potentially use someone from within their organization to perform the audit.

Some commenters also recommended that the proposed requirement, in § 138.310(d)(2), for internal auditors to have completed ISO 9001-2000 courses be deleted.

The Coast Guard does not agree. We believe that a robust auditing system that includes both internal and external auditing processes serves to enhance the effectiveness of a safety management system and provides a venue for identification of deficiencies and a process for corrective action. Requiring internal auditors to have completed an ISO 9001-2000 internal auditor/assessor training course, or a Coast Guard-recognized equivalent course, is intended to ensure that the internal auditor is familiar with basic auditing standards and procedures.

However, we want to accept those who have been trained under newer ISO 9001-2008, so we amended §§ 138.310(d) and 139.130(b)(3) to include that standard. In this final rule, both the ISO 9001-2000-based training we referenced in the NPRM and the ISO 9001-2008-based training meet our qualification requirement. The intended result of this training is to ensure that the internal audit meets minimum standards.

One commenter requested more information regarding the accepted course work for internal auditors. An individual offered suggestions for the minimum education for internal auditors.

The Coast Guard disagrees. The Coast Guard has incorporated ISO 9001 standards for internal auditor competencies in § 138.310 to reflect the best practices found in industry. The Coast Guard does not agree that standards either less than or in excess of these minimum competencies enhance the credibility of the internal auditing process. We made no changes from the proposed rule based on these comments.

We received comments that requested clarification of our requirements for external audits in § 138.315. One commenter opposed the provision in § 138.315(b)(2) that vessels must be selected randomly for an external audit

during the 5-year period of validity of the TSMS certificate, which the commenter viewed as subjecting a vessel to multiple external audits. He suggested that satisfying § 136.203 requirements for vessels with TSMS certificates should be sufficient. Another was confused by § 138.315(b)(2)'s requirement for an external audit prior to the issuance of the TSMS certificate because he felt it was the initial audit that leads to the TSMS certificate. One commenter questioned why we called for random audits.

In response to these comments we have changed § 138.315(b) to clarify the requirements for external vessel audits. We removed the requirement in proposed paragraph (b)(1) regarding the need for an external audit on all vessels prior to an owner or managing operator receiving the initial TSMS certificate. Upon reconsidering this provision we determined it is not necessary and instead we considered the need for vessel to undergo an external audit in relation to the initial COI for the vessel. And in doing so we considered the two different categories of vessels for which an owner or managing operator would need to obtain an initial COI. First, there are the vessels that have been owned or operated for more than six months which generally will include all existing vessels that are now coming under this subchapter. Secondly, there are

newly constructed vessels as well as existing vessels that an owner or managing operator may obtain, all of which will need a COI to operate but which have been owned or operated for less than 6 months. For the first category, § 138.315(b) (1) requires the vessel to undergo an external audit prior to obtaining the initial COI. For the second category, § 138.315(b) (2) requires that the vessel undergo an external audit no later than 6 months after receiving the initial COI. We note, that as required by § 138.505(b), the results of all external vessel audits are required to be provided to the cognizant OCMI. We believe that 6 months of operation is sufficient for owners or managing operators to fully implement their TSMS on their towing vessels and is also consistent with other SMS provisions including the duration of interim ISM vessel certificates.

Proposed § 138.315(b) (2) has remained the same but is now § 138.315(b) (3). The other change we made was to add § 138.315(b) (4) to clarify that not all information for an external audit necessarily needs to come from the vessel examination as some may be obtained from the owner or managing operator's office but that however, some of the information must be obtained by visiting the vessel.

As noted, we made these changes to clarify when vessels need to undergo an external audit as well as the relationship between the external audit and a vessel's initial COI.

As for the comment regarding confusion caused by § 138.315(b) (2), (now § 138.315(b) (3)), we note that, as proposed, paragraph (b) (1)'s requirement for an external audit of the vessel before issuance of the initial TSMS certificate is separate from paragraph (b) (2)'s requirement that an external audit of each vessel must be conducted during the 5-year period of validity of the TSMS certificate. We didn't view these requirements as confusing or conflicting but as noted above, we have removed the requirement proposed in § 138.315(b) (1). Nor do we consider § 138.315's sequencing of external management audits and vessel audits as confusing. As noted above, we removed proposed § 138.315(b) (1) and replaced it with provisions in (b) (1) and (b) (2) to specify when an external vessel audit is required relative to a vessel receiving the initial COI. Note that § 138.315(a) (2) and new § 138.315(b) (3) continue to specify the external management and vessel audits required during the validity period of the TSMS certificate. It is important that all vessels undergo one external audit every five years along

with external management audits to verify that an owner or managing operator's TSMS have been fully implemented and the TSMS certificate can be renewed. In proposed § 137.210(c), we did state that before it could be placed in an audited program, a towing vessel must successfully complete an initial audit by a third-party organization, and then be audited as required by part 138. In this final rule we removed any reference to an initial audit in part 137.

One commenter recommended replacing the random selection with a requirement for at least one intermediate verification between the second and third anniversary dates of the TSMS certificate. Another commenter stated that § 138.315's sequencing of external management audits and vessel audits seems confusing.

The commenter's concern about proposed § 138.315(b)(2)'s, now § 138.315(b)(3)'s, random-selection provision is unwarranted because that paragraph specifically calls for only one ("an") external audit of vessels during the 5-year period. In addition, as noted previously, we added § 138.315(b)(4) to allow for the use of objective evidence to verify compliance with some portions of the audit; however, some portions require visiting each vessel during the 5-year period. We call for

the vessels to be selected randomly to provide a risk-based approach and maximum flexibility for ensuring continual compliance with this subchapter. Therefore, we decline to amend § 138.315 to remove the random-selection provision.

We received comments from several companies noting that the proposed requirement in § 138.315(c), that audit documents to be maintained for 5 years and submitted to Coast Guard upon request, appears to conflict with the proposed § 138.505 requirement that the owner or managing operator submit each audit to the Coast Guard.

The Coast Guard agrees that these two sections contain different record requirements, but we do not view them as conflicting requirements. Paragraph (c) of § 138.315 calls for the maintenance of external audit results so that they are available when requested by the Coast Guard inspectors or an external auditor. Coast Guard inspectors may not have access to those audit reports submitted to the TVNCOE and external auditors may not otherwise have access to results from previous TPOs' management or vessel audits. The Coast Guard has amended § 138.505 to clarify who the submission is required to go to and the submission timeframe for the external audit results.

Three commenters suggested that a provision be added to § 138.315 that states the OCMI or COTP may be able to



extend the external audit time period due to the unavailability of an TPO.

The Coast Guard declines. Paragraphs (a) and (b) of § 138.315 establish a range of time for companies and TPOs to schedule external audits. A TPO that has been contracted to oversee the towing company's TSMS program is responsible for maintaining the audit cycles required by the regulations. The TPO has the ability to enter into contractual agreements to conduct required audits. However, in response to these comments, we added a paragraph (1) to § 139.120 to clarify the responsibilities of the TPO in regards to conducting required external audits and surveys within the intervals established in this subchapter.

Some commenters recommended that text be added to § 138.410 to address the process an auditor must follow when he or she identifies a non-conformity. These commenters recommended adding a requirement that the TPO notify the owner or managing operator and the Coast Guard immediately of any recognized hazardous condition that poses an imminent hazard to personnel, the towing vessel, or the environment. For less serious non-conformities, these commenters recommended that the auditor only require the

owner or managing operator to develop and implement a corrective action plan.

The Coast Guard agrees with the commenters' suggested edits. First of all, we amended § 138.505 to make clear where external audit result reports are to be submitted. Under § 138.505, all detected non-conformities would be reported to the Coast Guard because they would be part of the results of any external audit. Section 138.505 contains requirements on what is to be submitted to the Coast Guard by the external auditor and when it is to be submitted. In addition, we also amended § 138.410 to require the auditor to notify the Coast Guard within 24 hours of discovering a major non-conformity which, as defined in § 136.110, would cover hazardous conditions that pose imminent hazards. We also amended § 138.410 in response to this comment to ensure the auditor reports major non-conformities to the owner or managing operator.

We received several comments, particularly from maritime companies, requesting that we add language to proposed § 138.500 to specify which Coast Guard office or official the owner or managing operator should notify prior to conducting a third-party audit and to clarify that the Coast Guard's attendance at such audits - attendance that §

138.500(b) allows the Coast Guard to require - would not or should not cause delays in the audit.

The Coast Guard has amended § 138.500(a) in response to these comments to include a notification to the cognizant OCMI at least 72 hours prior to an external audit to mitigate potential delays in the conduct of the audit from Coast Guard scheduling, if attendance is required. In a related amendment, we deleted § 139.170 in its entirety because those requirements are already stated in parts 137 and 138.

A company suggested that § 138.505 clarify that audit records only be provided to the Coast Guard upon request. Also, a maritime company requested to be able to submit documents required by § 138.505 electronically.

The Coast Guard disagrees with the suggested change to § 138.505 to only provide records upon request. Final reports from the external management and vessel audits must be provided to the Coast Guard within 30 days of an audit. For the Coast Guard to properly oversee vessels using subchapter M's TSMS option, it is important that it receives final reports soon after they are completed. As noted above, we set the 30-day submission deadline in response to a previous comment. We note that in addition to this submission requirement, § 138.315(c) requires

records of external audits to be maintained for 5 years and made available on request. These reports are valuable historical records that must be available when needed by internal and external auditors as well as by the Coast Guard.

As for submitting external audits records or results required by § 138.505 electronically, we noted earlier that we amended § 140.915(b) to provide safeguards against false or late electronic entries in towing vessel and TSMS records. If the submitter uses equivalent safeguards for transmitting records, the Coast Guard will accept electronically transmitted external audits records that § 138.505 directs be submitted to the Towing Vessel National Center of Expertise (managing operator's compliance audits) and the cognizant OCMI (towing vessels external audits) so long as the means used allows the Coast Guard to reliably verify the person making the submission and the authenticity of the external audit records. For those seeking to submit external audits records or results to the Coast Guard electronically, the TSMS must address the means to be used to make electronic submissions. We have amended § 138.505 to reflect this option.

We received comments from a maritime company and an individual requesting more information regarding the

address to which the results of an external audit are to be submitted to the Coast Guard.

The Coast Guard agrees with these requests and has amended § 138.505 so that it is clear to the TPO which Coast Guard office or official external audit records must be submitted to. Also, we have inserted the address for the Coast Guard Towing Vessel National Center of Expertise.

We received six comments from maritime companies requesting more information be provided regarding potential actions the Coast Guard may take if an owner is found to be noncompliant with the TSMS or requirements in subchapter M. Also, two commenters suggested that the TSMS is "unenforceable" and that we do not have a sufficient penalty process in place for violations.

The company and its vessels are subject to a broad range of actions by the Coast Guard and the TPO depending on the conditions found on the vessel. Companies and vessels operating under a TSMS that fail to meet minimum requirements may be subject to enforcement, including Captain of the Port orders restricting operations, suspension and withdrawal or revocation of the COI, and suspension or revocation of the TSMS certificate. Also, as we state in § 140.1000, violations of the provisions of this subchapter will subject the violator to the applicable

penalty provisions of Subtitle II of Title 46, and the penalty provisions of Title 46, and Title 18, U.S.C.

A company expressed concern about whether the Coast Guard would have resources to hire a sufficient number of competent vessel inspectors for convenient scheduling for the company, including drydock scheduling.

Regarding having a sufficient number of competent vessel inspectors, as we indicated in response to comments above, the Coast Guard is prepared for what it has estimated will be the demand for annual inspection from owners and managing operators selecting the Coast Guard inspection option. The Coast Guard will closely monitor the demand for inspections and will make resource adjustments as necessary.

Two maritime companies felt that use of any Coast Guard inspection resources should be based on risk and that those companies that have had satisfactory safety records, and successful TSMS audits, should not have the same level of Coast Guard oversight as companies with a history of poor performance.

The Coast Guard agrees with the comment about its allocation of resources and intends to use a risk-based approach based on safety, survey, inspection and audit histories.

One commenter requested information regarding how the Coast Guard will manage conflict of interest potentially created by future employment opportunities in the towing vessel industry offered to those conducting inspections. All Coast Guard personnel are bound by ethics laws and regulations which govern their ability to seek and accept non-federal positions following their government service.

One commenter urged the Coast Guard to obtain full jurisdiction over regulated towing vessels, including areas that OSHA is currently regulating.

This request is beyond the scope of this rulemaking. OSHA will continue to enforce its requirements on shipyard employers that perform shipyard employment subject to 29 CFR 1915 on inspected and uninspected vessels. OSHA will also continue its current enforcement on uninspected vessels.

A towing company suggested that a more "streamlined" TSMS be offered to smaller companies so as to avoid burdensome administrative requirements.

A safety management system in general, and the TSMS in particular, is a flexible tool for management in that it is user-defined to address the unique operations, equipment and hazards present in the vessel operator's market. For the small business operator with a fleet of one or two

vessels the TSMS may not need to be an expansive document. The requirements to identify the range of operations for a small towing vessel serving a limited area and market is likely to be much less than that of a larger towing vessel company consisting of dozens of vessels and serving a large, diverse market over a large area.

The TSMS for small operators is scalable to their operation. Thus, it can be "streamlined" to address a limited set of assets, process, and personnel. As a towing vessel operation grows, so too would the TSMS need to scale up to identify the growing inventory of operations and accompanying safety concerns. We have not made any changes from the proposed rule based on these comments.

One commenter suggested that the safety culture in the towing vessel industry could be further developed by addressing the communication barrier between managers and operation personnel.

We believe the safety culture the commenter refers to will be greatly enhanced in companies with a TSMS in place. A TSMS is the central document that directly links the towing vessel and the shore-based management operation. For a TSMS to be effective, management and operational personnel must continuously communicate. The TSMS documents processes, responsibilities and required action



that define the mutually supporting actions between managers and operation personnel. The Coast Guard believes that the integration of the TSMS will result in enhanced safety as it promotes greater communication and also defines corrective actions required when communications fail to produce the intended result of improving safety.

One commenter suggested that for small companies that choose to elect the Coast Guard inspection option, language should be added to indicate that "alternative compliance methodologies" are acceptable.

As we noted above, the Streamlined Inspection Program in part 8, subpart E, of this chapter, is an option that vessels subject to subchapter M may seek to use to renew a COI. Also, in § 136.115, we proposed accepting certain alternative approaches to satisfying subchapter M requirements. We did not propose, however, to allow vessels subject to subchapter M to take advantage of part 8, subpart D's, Alternative Compliance Program to obtain a COI. We have made no changes from the proposed rule based on this comment.

Another commenter suggested updating the Streamlined Inspection Program to include electronic, downloadable forms, and user-friendly templates.

This suggestion is outside of the scope of this rulemaking. We made no changes from the proposed rule based on this comment.

In the NPRM we discussed comments submitted in response to seven questions we posed in a December 30, 2004, Inspection of Towing Vessels notice. In response to that portion of the NPRM, one of these commenters recommended that all vessels should comply with the proposed SMS rules within 1 year. The same commenter suggested that using the ISM Code from 2002 as a guideline in developing the SMS requirements will allow for a number of operators using the AWO RCP to be compliant.

Neither our proposed rule nor this final rule would require towing companies selecting the Coast Guard compliance option to establish a safety management system. This rule provides an option for towing companies to use the ISM systems currently published in 33 CFR part 96 or other safety management systems acceptable to the Coast Guard under § 138.225. The Coast Guard believes that we are providing sufficient flexibility for towing companies that want to adopt the safety management system option under subchapter M.

We also received two comments on the proposed rule that opposed the TSMS. One stated that TSMS should not be

the basis of any inspection regime and that any governmental inspection program should be staffed appropriately to provide for Coast Guard inspections, and asserted that having third party or other industry inspectors opens the door to profiteering or altered inspection requirements not originally intended by the regulations.

The Coast Guard views subchapter M external and internal survey programs, combined with Coast Guard oversight of vessels and organizations choosing the TSMS option, as an effective means of helping to ensure compliance with subchapter M requirements. In addition, all vessels subject to subchapter M will be inspected by the Coast Guard before obtaining a COI and at least once every 5 years. See §§ 136.210 and 136.212.

Another commenter stated that TSMS is not necessary as an option because the Coast Guard can do the inspections as outlined in subchapter T (Small Passenger Vessels) which incorporates everything that is required in subchapter M. We disagree that subchapter T is appropriate for the unique nature of towing vessel operations, which is reflected in our authorization in 46 U.S.C. 3306(j) to establish an SMS "appropriate for the characteristics, methods of operation, and nature of service of towing vessels." We believe that

a towing-vessel-specific subchapter is appropriate, rather than imposing existing inspected vessel regulations on towing vessels. Towing companies that may lack the resources to develop and implement a TSMS, or choose not to, must follow the Coast Guard inspection option.

#### I. Third-party organizations (TPOs) (Part 139)

We received several comments, mostly from maritime companies, requesting that the list of approved TPOs be made available online.

The Coast Guard concurs with this recommendation and plans to publish a list of TPOs for the towing vessel industry to refer to when considering the selection of a TPO. The Towing Vessel National Center of Expertise (TVNCOE) will update and maintain the list and make it available at: [www.uscg.mil/tvncoe](http://www.uscg.mil/tvncoe).

Other commenters requested that § 139.120 be changed to include the name of the Coast Guard program office to which an organization seeking to become a TPO should submit its request.

The Coast Guard agrees. We have amended § 139.120 to identify the office and address of the TVNCOE, where such requests should be sent.

One commenter expressed concern regarding the option offered by the wording of §§ 139.115 and 139.120 for TPOs

to create customized audit guidelines and tools. The commenter pointed out that the variety of audit reports could present inconsistencies during compliance checks.

As proposed, part 138, subpart D, of this final rule requires that audits must be of sufficient depth and breadth to ensure the owner or managing operator meets the requirements outlined in § 138.220. In our NPRM, we noted that an elaborate TSMS designed for large operations may be impractical for owners or managing operators with small operations, and that a small company may seek to use a significantly scaled down TSMS tailored to its operation. We acknowledge there will be variations in TSMSs. Similarly, we acknowledge that §§ 139.115 and 139.120 allows TPOs to develop customized audit guidelines and tools. The Coast Guard intends to issue guidance that may include sample checklists, job aids, and guides, but we have not changed §§ 139.115 and 139.120 based on this comment because the requirements in part 138, subpart D, must still be met and we do not favor more prescriptive, one-size-fits-all standards in part 139.

One commenter expressed confidence in the Coast Guard's ability to oversee the inspection of towing vessels conducted by classification societies. We received other comments expressing support for the use of qualified or

trained third-party auditors and surveyors. Also, several maritime companies and a professional association supported Coast Guard's proposal to allow smaller entities, other than recognized classification societies, to apply for Coast Guard approval.

Under proposed § 139.110 a recognized classification society automatically would have met the requirements of a TPO for the purposes of part 139. However, as noted above, we have amended § 139.110 to clarify the distinction between audits and surveys. A recognized classification society meets the requirements of a TPO for the purpose of performing audits. An authorized classification society meets the requirements of a TPO for the purpose of performing surveys. We did this to ensure the Coast Guard has evaluated the classification society's ability to carry out vessel surveys. We added a definition in § 136.110 of "authorized classification society" for clarity. Paragraph (c) of § 139.110 has been amended to specify that organizations qualifying as TPOs under paragraphs (a) or (b) of that section must ensure that employees providing services under part 139 hold proper qualifications for the particular type of service being performed. We also note that the criteria stated in our TPO application section, § 139.120, allow small entities to become TPOs. As we

defined it, the term "third-party organization" is used to describe an organization approved by the Coast Guard to conduct independent verifications to assess whether TSMs and towing vessels comply with applicable requirements contained in this subchapter.

All auditors and surveyors approved to conduct subchapter M external surveys and audits would be part of a TPO. We set standards for auditors and surveyors in § 139.130, but these are used in conjunction with § 139.120 where we require TPO applicants to list the organization's auditors and surveyors who meet the requirements of § 139.130. On further review of § 139.130(a), the Coast Guard realized it makes sense to include "surveyor" in this lead paragraph. The specific qualifications for an auditor and a surveyor remain in paragraphs (b) and (c), respectively. We have edited this section accordingly.

One commenter expressed concern that the requirements for TPOs would result in only classification societies qualifying to become auditors. The commenter was concerned that class society personnel are experienced in blue water shipping but not towing vessel operations.

The Coast Guard developed this rule to ensure that organizations, including small entities, with the requisite knowledge, experience, and qualifications would be eligible

to become a TPO. The standards in part 139 allow organizations other than recognized classification societies to become TPOs, and meeting these standards should be within the capabilities of small entities seeking to provide such services to the towing industry.

As qualified in our discussion above, § 139.110 does not subject recognized or authorized classification societies to additional requirements for application as a TPO; however, as stated in § 139.110(c), their employees providing services under this part must have the proper qualifications in accordance with § 139.130. The Coast Guard established this requirement to ensure that employees of recognized classification societies have the proper experience in towing vessel operations in order for them to carry out TPO audits under subchapter M.

To help readers better understand that relationship, in the regulatory text of this final rule we have converted references to "approved third-party auditor" or "approved third-party surveyor" to show this relationship - e.g., "surveyor or auditor from a third-party organization." Also, although we have left some difficult-to-change instances in place, we avoid using the word "approved" with TPO because, as noted above, by definition a TPO is approved.



We received several comments, particularly from maritime companies, supporting Coast Guard's oversight of third-party auditors and urging the Coast Guard to implement the approval process for third parties prior to the finalization of the rule. Commenters felt that the Coast Guard would need to ensure that a sufficient pool of third-party approvers is available prior to the increased demand created by subchapter M compliance.

The Coast Guard is aware of the concern regarding the availability of third-party organizations. Subchapter M regulations governing third-party organizations need to become effective before the Coast Guard will be able to evaluate requests from organizations seeking to become a TPO under part 139. That effective date is [INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]. Also, on that date, in accordance with § 139.110, recognized classification societies and authorized classification societies may begin acting as TPOs for the purpose of conducting subchapter M audits and surveys. As we noted above, we used a phased approach in our § 136.202 deadlines for obtaining a COI so as to distribute the work load over a 6-year period from the effective date of this final rule.

A commenter suggested that the Coast Guard publish a Navigation and Vessel Inspection Circular (NVIC) that provides the qualification process for TPOs.

The Coast Guard plans to issue a guide to assist small entities, including those interested in becoming a third-party organization under subchapter M. However, we believe that part 139 is sufficiently specific. Section 139.120 identifies the information an organization would need to submit to become a TPO for purposes of subchapter M. We have amended § 139.120 so it more precisely identifies where such requests should be sent. Section 139.130 includes a list of the qualifications of auditors and surveyors that those applying to become a TPO need to use to identify that organization's auditors and surveyors who meet these requirements. The Coast Guard will consider issuing guidance if it identifies wide-spread confusion after this rule is published.

Some commenters, including maritime companies and trade associations, viewed the qualifications required for surveyors in § 139.130 as inadequate and recommended that the qualifications include sufficient background, training, and experience to qualify as a TPO. One of these commenters suggested that training for both auditors and surveyors should be provided by an independent

accreditation organization. A commenter provided text edits to the language in proposed § 139.130(b)(2) and recommended several minimum education requirements for auditors and surveyors.

Section 139.130(c) already specifies a minimum level of education, skills, and experience needed for surveyors from TPOs. The ISO standard training requirement for auditors and the marine surveyor's accreditation requirement, as stated in § 139.130, incorporate a role of independent accreditation organizations in the required training for both surveyors and auditors from TPOs. The Coast Guard feels that the criteria in § 139.130, which lists qualifications of auditors and surveyors, provides a sufficient minimum level of education, skills and experience needed for third-party surveyors and auditors, and that we cannot point to evidence that higher-level-education requirements would be justified. Owners, managing operators, and TPOs can establish additional requirements at their discretion.

Some commenters suggested that the Coast Guard require surveyors to receive ISO 9000 series training.

In § 139.130 we include successful completion of an ISO 9001-2000 or 9001-2008 lead auditor/assessor course or Coast Guard recognized equivalent qualification for

auditors, but not surveyors. The Coast Guard does not believe that we should add training in ISO 9001 standards as a required qualification for surveyors because surveyors conduct direct inspections of vessel equipment and systems as opposed to auditing SMS processes. In addition, the ISO does not have a 9001 equivalent for surveying at this time.

We received a comment requesting that existing qualified and certified inspectors that participate in an auditing program be "grandfathered" as approved third-party inspectors.

The Coast Guard does not intend to allow grandfathering of existing inspectors who may be participating in some form of an existing program. The Coast Guard has no oversight of these personnel and has no specified minimum qualifications for them to conduct such work. If a person with qualifications required in § 139.130 wishes to conduct subchapter M TSMS audits or survey, he or she would need to start or become part of a TPO.

We received requests for more information regarding the monitoring and removal process of auditors or third-party companies.

In § 139.145, we describe the process for a suspension of approval when the Coast Guard has determined that a TPO

is not complying with the provisions of part 139. Under that process the Coast Guard will provide details to the TPO of the organization's failure to comply and provide a time period for the organization to correct its failure(s). In this final rule, we shorten § 139.145 by replacing a repeated list of procedures the Coast Guard must follow for a partial suspension with a reference pointing back to the same procedures listed in paragraph (a) for a suspension.

In § 139.150, we make clear that the Coast Guard may revoke the approval of a TPO if the organization has demonstrated a pattern or history of failing to comply with part 139, substantially deviates from the terms of the approval granted under part 139, or has failures that indicate to the Coast Guard that the organization is no longer capable of carrying out its duties as a TPO. We amended § 139.150, to provide provisions for Coast Guard notification to TPOs of actions taken under § 139.150. In terms of monitoring, we note that § 139.160 lays out means for the Coast Guard to oversee TPOs.

Two commenters requested more information regarding the reference to "Required training courses for the auditing of a Towing Safety Management System" in § 139.130 (b) (4) .

Paragraph (b)(4) of § 139.130 in the proposed rule listed "[s]uccessful completion of a required training course for the auditing of a Towing Safety Management System" as one of the qualifications in paragraph (b) an auditor must meet. Because auditors must meet all the qualifications listed in paragraph (b), we have deleted the redundant word "required" from paragraph (b)(4). Also, for added clarity and consistency we removed "required" from paragraph (b)(5)(ii) for the previously stated reason.

Given the nature of the towing industry, the Coast Guard believes that auditors should complete a TSMS-specific auditing course. At the time of this writing, the Coast Guard is aware of at least one TSMS Auditor course and the Coast Guard believes that additional courses will be developed once this rule becomes effective, similar to the way courses developed for auditors of ISM-based safety management systems. We anticipate that market forces will meet the demand for TSMS-specific auditing courses.

One commenter requested that the regulation be modified to only accept auditors that are U.S. citizens.

The Coast Guard disagrees with this recommendation. This commenter did not provide reasons why we should make the requested change and we find no reason to base the eligibility for becoming an auditor in a TPO on

citizenship. There are towing vessels operating overseas or in U.S. jurisdictions outside of the continental U.S. Requiring that an auditor be a U.S. citizen might unnecessarily limit the availability of auditors to these vessels. Also, a recognized classification society may operate around the world and is not required to employ only U.S. citizens.

A commenter suggested that both auditors and surveyors must be accredited by an independent accreditation organization that is accepted by the Coast Guard and is organized especially for the purpose of accrediting auditors and surveyors to perform work in documenting compliance with subchapter M requirements for towing vessels. The commenter did not believe that the National Association of Marine Surveyors (NAMS), the Society of Accredited Marine Surveyors (SAMS), or another other organization should be allowed to accredit individual surveyors for purposes of subchapter M until the Coast Guard has approved the organization's accreditation processes. This commenter suggested the possibility that this accreditation process could also be done by an independent third-party auditor/surveyor accreditation organization that is accepted by the Coast Guard.

We note that, that as with other organizations, NAMS and SAMS are not required to apply for approval to the Coast Guard to accredit individual surveyors. In § 139.130, where we list qualifications for auditors and surveyors, we have removed paragraph (c)(4), which references accredited marine surveyors and NAMS and SAMS. Instead, we added "accredited marine surveyor" to a list of other relevant marine experience in paragraph (c)(2)(ii).

These edits eliminate names of specific accrediting organizations, but still include work experience as an accredited marine surveyor as a factor to be considered and identified in applications. The Coast Guard believes that accreditation is a valuable factor to consider, but not an essential one - as reflected in the proposed rule which only required that qualifications from paragraph (c)(1) (education) and one of the two remaining paragraphs, (c)(2)(i) or (ii), be met. At this time, the Coast Guard does not see the need for it to accept an independent accreditation organization for the purpose of accrediting subchapter M auditors and surveyors.

Some commenters recommended that the Coast Guard require that all TPOs provide and maintain a list of current and former auditors and surveyors.



As we proposed in the NPRM, § 139.135(a) of the final rule specifically requires TPOs to "maintain a list of current and former auditors and surveyors." In § 139.135(b), we remove the word "for approval," but retained the requirement that to add an auditor or surveyor, the TPO must submit that person's experience, background and qualifications to the Coast Guard. We note that it is the responsibility of the TPO to ensure that auditors and surveyors conducting work for their organization satisfy the qualifications requirements in § 139.130. The submissions required by § 139.135(b) will assist the Coast Guard in its continual oversight of TPOs.

A State government and a task force suggested that the Coast Guard consider developing a TPO-rating criterion that is based on the percentage of towing vessel companies (for which the TPO has issued a TSMS certificate) that the Coast Guard independently finds to have major non-conformities. If the number of companies in a given period having major non-conformities exceeds that percentage, the TPO should be automatically placed on the a "grey list," and be required to demonstrate to the Coast Guard that it is taking actions to improve its oversight/auditing program. The commenters felt that this criterion would help vessel owners and

operators assess the qualification of its oversight program.

The Coast Guard will consider this recommendation after it gains experience with the implementation of these rules when developing metrics for evaluating and overseeing TPOs.

Two commenters expressed concern that a company may switch TPOs to find one that enforces compliance with subchapter M less rigorously. These commenters suggested that the Coast Guard develop a criterion to prevent towing vessel companies from "third-party organization hopping," such as a provision that if a towing vessel company changes TPOs more than once in a 5-year period, an external Coast Guard inspection of the company's TSMS documents and vessels is automatically triggered.

The Coast Guard acknowledges that a company may seek to switch its TPO for the reason suggested, but a company may also change its TPO for reasons beyond its control or for reasons other than seeking to avoid full compliance with subchapter M. Because switching TPOs is not necessarily a reason to focus more attention on a given company, the Coast Guard would be reluctant to adopt the more-than-once-in-5-years metric suggested by the commenters, but it does acknowledge that changing TPOs

could be a signal that more scrutiny should be focused on a company. We note that the monetary costs and the loss of time associated with such changes will be factors a company would consider before switching to a different TPO, and therefore we do not expect TPO switching to be a common occurrence.

Referencing §§ 139.120 and 139.155, a commenter noted that the NPRM does not specify a process for a company to follow if it needs to appeal a decision of its TPO to deny or revoke issuance of a TSMS certificate. The commenter also noted that the Coast Guard must create a specific appeals process because towing vessel companies with a TSMS are dependent on third-party documentation to obtain a COI. The commenter wrote that the proposed rule required third parties to develop procedures for appeals, and allows a company to follow existing, general appeals procedures, but that more detail is needed.

The Coast Guard has provided a specific appeal process in this final rule. As reflected in above, in § 136.180 we stated that any person directly affected by a decision or action taken under this subchapter by or on behalf of the Coast Guard, may appeal in accordance with subpart 1.03 in subchapter A of this chapter. We have added § 1.03-55 to identify the Coast Guard official or office appeals should

be directed to, including the appeal of matters relating to action of a third party, such as when a third party rescinds a TSMS certificate.

A commenter expressed concern regarding a potential conflict of interest for companies that develop TSMSs or provide TSMS-related training sessions. The commenter said that such a company would not be able to objectively inspect systems that they developed because finding fault with the towing company would be a reflection on their own work. Moreover, this commenter saw a related potential conflict of interest resulting if the only companies that could be hired to conduct surveys and audits were those that didn't develop the TSMS. In that situation, the commenter noted, it may be the developer's direct competitor who is hired as the TPO and that competitor would have a natural tendency to be biased against programs that look different from the ones it produces.

Section 139.120(o) requires TPO applicants to disclose any potential conflicts of interest. Section 139.120(p) requires applicants to submit a statement to the Coast Guard stating that their employees who are engaged in audits and surveys will not engage in any activities that could result in a conflict of interest, which we define in § 136.110, or that could otherwise limit the independent

judgment of the auditor, surveyor, or organization. And under § 139.150(a)(3), conflicts of interest are a factor the Coast Guard may consider when deciding whether to revoke the approval of a TPO. An organization does not have to be a TPO to develop or help implement a TSMS, but a TPO is the only entity that can verify compliance with a TSMS or issue a TSMS certificate.

One company stated that an organization should be assigned to oversee the third-party process in order to ensure consistency in the use of resource materials and tools. Another commenter asked what process would be in place to oversee TPO training and approvals.

As reflected in the NPRM and this final rule, the Coast Guard will provide direct oversight of TPOs. A list of Coast Guard oversight activities appears in § 139.160. This oversight is intended to ensure that TPOs that conduct audits and surveys for towing vessels subject to this subchapter comply with part 139 requirements. To the extent consistency in the use of resource materials and tools by TPOs is required by part 139, the Coast Guard will provide the oversight requested. To the extent it is not, we view the requested oversight as an area best left to market forces. In reviewing proposed § 139.160(g), which discussed the Coast Guard being able to require a

replacement for noncompliance or poor performance, we deleted that paragraph because it is covered by suspension provisions in § 139.145(b).

We received a comment from a towing company that felt that because of limited Coast Guard resources, relying on third-party auditors would be a solution to the increase in demand for inspections after implementation of subchapter M.

We concur that the use of TPOs under the TSMS option may reduce the number of Coast Guard inspections required to implement subchapter M.

We received comments from towing companies and professional associations that suggested that TPO requirements in proposed § 139.160(f) and (g) be moved to § 138.510 because of the discussion of owner and managing operator compliance oversight of TSMS. One commenter suggested that § 139.160(f) be moved under § 138.400.

The Coast Guard disagrees with these recommendations. Section 139.160 lists discretionary oversight activities the Coast Guard employs in its oversight of TPOs. These oversight activities should not be moved under § 138.510, which describes the Coast Guard's authority to direct owners, managing operators, and third parties to explain or demonstrate portions of the TSMS when there is evidence

that the TSMS is not in compliance with part 138 requirements, nor under § 138.400, which addresses audits of safety management systems. We did remove § 139.160(g), however, because it is covered by suspension provisions in § 139.145(b), and we also removed proposed paragraph (c) because there was no need for us to refer to assigning personnel to observe or participate in audits or surveys.

A commenter suggested that the Coast Guard open communications with stakeholders to become better informed of options to ensure consistency in the auditing process.

The Coast Guard established the TVNCOE in 2010 to help promote consistency in the regulation of towing vessels and to promote communications between the Coast Guard and industry as we moved towards certification of towing vessels. The TVNCOE communicates routinely through their national customer service representatives, list server, and website (<http://www.uscg.mil/tvncoe>) with those who will be subject to subchapter M requirements. As the Coast Guard approving authority for TPOs, TVNCOE will have oversight responsibilities to assure consistency with the auditing process.

One commenter said that the Coast Guard needs to “assure the integrity” of the third-party approval system.

The Coast Guard expects that by using a single entity, the TVNCOE, to review and approve TPOs, the Coast Guard will ensure consistency and integrity in the subchapter M TPO system.

A commenter felt that in the context of part 139, it is not clear if a third-party auditor needs to be associated with a TPO or if an auditor can be approved as an independent operation.

The Coast Guard notes that to perform external audits under subchapter M, the auditor must be listed by a TPO as one of its auditors who meets the requirements of § 139.130. This individual need not be exclusively employed by a single TPO. It would be possible for a single auditor - who worked in a remote location, for example - to work for more than one TPO. As previously mentioned, the Coast Guard has revised language in this final rule to make it clear that under subchapter M, external surveys and audits must be conducted by auditors and surveyors who are part of - and subject to oversight by - a TPO.

An individual noted that part 139 does not contain procedures on how to conduct a damage survey of a vessel.

Part 139 deals with TPOs and would not contain requirements relating to a damage survey. Surveys are generally discussed in part 137. Section 137.300(b)



discusses an OCMI's ability to require further examination of the vessel in the event of damage. In addition, if the vessel is damaged, § 136.240 addresses how to obtain permission to proceed for repairs. The extent of a given vessel's damage and other circumstances may warrant specific survey requirements.

One towing company suggested the need for a peer auditing program to assess consistency and competency among TPO auditors and surveyors.

TPOs will be required to adhere to ISO 9001 standards for operating in accordance with a Quality Management System, and their auditors must have completed training in ISO 9001 Quality Management Systems Auditing. We list "accredited marine surveyor" in § 139.130, along with other-relevant-marine-experience, as a non-mandatory qualification for surveyors.

We do not agree with the commenter that supplemental peer-review of TPO auditors and surveyors is warranted or necessary. We note that the work of surveyors will be subject to audits, and as noted above in our discussion of § 139.160, the Coast Guard will be overseeing the work of TPOs.

An individual argued that the intent of the term "third party" is to explain that the Coast Guard is a third

party to towing vessels and the term should not apply to the organizations to which the Coast Guard is delegating authority.

The Coast Guard does not use the term "third party" in the way suggested by this commenter. We use the term to refer to a TPO, which we define as "an organization approved by the Coast Guard to conduct independent verifications to assess whether towing vessels or their TSMSs comply with applicable requirements contained in this subchapter." As previously noted, we have made changes to clarify our third-party references in this rule, but we have made no changes from the proposed rule based on this comment.

As noted above in our discussion of comments related to part 138, we removed § 139.170 because those attendance provisions are already stated in parts 137 and 138.

#### J. Operations (Part 140)

We received many general comments from individuals, companies, and associations concerning our operational requirements in part 140.

Two commenters noted that the purpose section of Part 140 does not explain how the Coast Guard will ensure that non-TSMS operating companies comply with the regulations because these companies do not have documented written

procedures and are not subject to audits. One commenter expressed concern that non-TSMS companies would have lower operation costs and their services would be less safe.

In the NPRM, the Coast Guard offered the TSMS or Coast Guard annual inspection option. For vessels that do not choose the TSMS option, we will use Coast Guard inspections to verify compliance with the requirements of this subchapter. We are confident that the Coast Guard annual inspection option will help to ensure that towing vessels are operated at an appropriate level of safety. The casualty reviews presented in the benefits chapter of the Regulatory Analysis found many instances in which the Coast Guard inspection and TSMS options were rated the same in risk reduction benefits and other cases where the TSMS options scored higher. If a company believes the Coast Guard inspection option is more cost-effective than a TSMS, this rule provides the flexibility for that choice. We have made no changes from the proposed rule based on this comment.

In reviewing § 140.200, and similar sections in parts 141 through 144 which state that if a TSMS is applicable to the vessel it must have provisions for compliance with that part, we decided to delete those sections. They are

unnecessary because part 138 addresses what the TSMS must cover regarding all subchapter M requirements.

A company noted that the list of mariners required to have a Transportation Worker Identification Credential (TWIC) by § 140.205(e)'s reference to 33 CFR 101.105 is too broad and should instead be the same requirement as under 33 CFR 101.515. Further, an individual noted that the rule did not have language explaining the requirement for TWIC cards for individual employees on vessels moving certain dangerous cargo.

In part 140, subpart B, which includes § 140.205, we do require that the vessel be operated in accordance with applicable laws and regulations, but there is no explicitly stated requirement for personnel to hold a TWIC. The Coast Guard understands the problem with § 140.205(e)'s reference to 33 CFR 101.105, and in the final rule we removed that reference and replaced it with the personal identification requirements of 33 CFR 101.515 - which do not require personnel to have a TWIC.

One commenter suggested that complete background checks for employees should not be required for those crewmembers who are required to obtain a TWIC.

The Coast Guard notes that in general a background check is included as part of receiving a TWIC, and we also

note that we are not requiring background checks in these regulations.

Regarding a Master's authority on board, an individual suggested that proposed § 140.210 ensure that the TSMS contains a clear statement emphasizing the master's authority.

The Coast Guard proposed in § 140.210(b) that the master must take adequate corrective action or cease operations when he or she believes that an unsafe condition exists. Moreover, § 140.210(c) further states that the master has the authority to take steps deemed necessary and prudent to assist vessels in distress or for other emergency conditions. The Coast Guard believes that these requirements are sufficient to provide the master of the vessel the appropriate latitude and discretion to exercise his or her duties to ensure the safety of the vessel. In reviewing § 140.210, we have added the officer in charge of a navigational watch as also having the responsibility to cease operation or take adequate corrective action if he or she believes it is unsafe for the vessel to proceed. Also, we amended § 140.210(d) to indicate that the crew must ensure that either the master or the officer in charge of a navigational watch is made aware of the vessel's condition. And in § 140.605 we moved a requirement into paragraph (a)

that was covered by proposed paragraph (c) and added "or officer in charge of a navigational watch" in the discussion of determining if the vessel meets all stability requirements before getting underway. We made similar revisions to the requirements for master or officer in charge of a navigational watch in §§ 140.610(c) (hatches and openings) and 140.615(b) (tests and examinations).

One commenter felt that if the language in § 140.210(d) is intended for crew members who are responsible for maintaining a vessel's COI, then the Coast Guard should require that the vessel's TSMS contain a provision requiring that crew members receive training on how to complete the tasks assigned to them by the TSMS and how to comply with the COI.

The Coast Guard proposed in § 138.220(b)(2)(ii) that the TSMS contain a policy relating to training personnel in "duties associated with the execution of the TSMS." The Coast Guard believes that this requirement is sufficient to ensure that crew members are aware of their duties under the TSMS. We have made no changes from the proposed rule based on this comment.

A company suggested that the term "pilot" would be more appropriate instead of "mate" in § 140.210(c). Another commenter suggested that "mate (pilot)" be deleted

from § 140.210(c) because its current use suggested that the mate and master were equal, rather than the master having the ultimate authority on the ship. Alternatively, the commenter suggested that language be added to § 140.210(c) stating that the mate must inform the master before deviating from the COI if time and circumstances permit.

The Coast Guard recognizes that throughout the diverse towing industry there are differences in terminology, including in the use of "pilot" or "mate." For purposes of consistency with other sections, the Coast Guard has chosen to use the terms "master or mate (pilot)" in this rule, or "officer in charge of a (or the) navigational watch" as appropriate, as they are the most common currently applied terms in related regulations and policy, including manning regulations in 46 CFR part 15. The Coast Guard does not agree with the comment about "mate (pilot)" because we are simply referring to the responsibility of the person in charge of the navigational watch. The Master retains overall responsibility for the safety of the towing vessel as prescribed in § 140.210(a). We have made no changes from the proposed rule based on this comment.

We received two comments suggesting the development of a policy to restrict the use of cell phones and other non-essential electronic devices by pilothouse watchstanders.

The Coast Guard has added language in § 140.210(d) requiring the crew to minimize distractions when performing duties. This amendment is intended to prevent the non-essential use of cell phones and other distractions that take away from a crewmember's situational awareness. Given the commenters' focus on pilothouse watchstanders, we have amended § 140.640 to expressly require the officer in charge of a navigational watch to maintain situational awareness and minimize distractions.

We received two comments suggesting that either the word "lookout" be deleted from § 140.400(c), or that the word be changed to the phrase "supplemental lookout." They argued that the term "lookout" was superfluous because the master or mate serves as his or her own lookout.

The Coast Guard is requiring in § 140.400 that a record be maintained for all watchstanders going on and off watch. Lookouts are added by the master or mate (pilot) under the provisions of § 140.630. This does not preclude the Master or Mate (Pilot) from acting as a lookout, when appropriate. Section 140.400 requires that lookouts and all other members of the navigation watchstanding team must



have times of service entered and recorded. Our addition of "officer in charge of a navigational watch" to the list of watchstanders does not change our need to include lookouts.

We received comments from an individual and an association who recommended that the Coast Guard should require that any mariner, engineer, or watchstander that works in the engine room, or near machinery, be provided with initial safety training and additional training on the operation and maintenance of installed machinery prior to beginning work in these areas.

In §§ 140.410(b)(10) and 140.515, the Coast Guard specifically requires safety orientation training on the awareness of and expected response to any hazards inherent to the operation of the towing vessel which may pose a threat to life, property, or the environment. Section 15.405 of 46 CFR requires that crewmembers be familiar with the relevant characteristics of the vessel prior to assuming their duties and responsibilities, including the main propulsion and auxiliary machinery, such as steering gear systems and controls. We have amended §§ 140.405 and 140.410 to note that personnel must meet the requirements in §§ 15.405 and 15.1105 as appropriate. In § 140.405, we also added threats to the environment during an emergency

as situations when the duties and duty stations of each person onboard must be identified; this amendment is consistent with general vessel operation objectives stated in § 140.205(a).

Under §§ 140.510 and 140.515, it is the responsibility of the owner or managing operator to identify the unique training required to mitigate the risk to the specific machinery and operating equipment aboard each particular towing vessel.

Several commenters suggested that proposed § 140.415 include the following text in the "reserved" paragraph: "A safety orientation need not be provided to an individual that is not a crewmember if that individual is accompanied while on board the towing vessel by a crewmember who is familiar with the items specified in § 140.415(a)."

The Coast Guard does not agree. The Coast Guard believes it is unreasonable to assume that during an emergency the escorting crewman would have no other responsibilities or duties other than escorting the individual at all times while aboard the vessel. The Coast Guard believes that a safety orientation for individuals visiting the vessel would not place an undue burden in terms of time or distraction. The Coast Guard has made no changes from the proposed rule based on these comments.

However, note that for simplicity we have removed the “reserved” paragraph, made the previous paragraph (a) into introductory text, and made the previous subparagraphs of (a) into paragraphs (a) through (d), as appropriate.

One commenter asked for clarity regarding specific drills and training that would be required in § 140.420(a), and thought that the requirement of drills to respond to “other threats to life, property, or the environment” was too ambiguous. Another noted that additional requirements for first-aid trainings should be included in the regulation.

The Coast Guard in § 140.420(a) provided specific emergency drills that must be performed. This includes abandoning the vessel, recovering persons from the water, responding to onboard fires and flooding, or responding to other threats to life, property, or the environment. The owner or managing operator is responsible for identifying any other additional training and drills required in addition to the above identified requirements based on the specific intended service of their vessels. This may be covered by the required risk assessment for TSMS vessels. The Coast Guard has made no changes from the proposed rule based on these comments.

We received a recommendation for text additions to proposed § 140.420 that included the option for “e-learning” for emergency drills and trainings. The commenters suggested that the Coast Guard not require follow-on discussions with a subject matter expert if the “e-learning” provides scoring at the completion of training and the individual receives a score higher than the minimum required by the TSMS.

The Coast Guard in § 140.420(e) specifically provides for alternative forms of instruction for the training aspect of § 140.420; however, the participation in emergency drills must take place on board the vessel so far as practicable. This section permits training required by this rule to be conducted by viewing electronically or digitally formatted training materials followed by a live discussion led by someone familiar with the subject matter. The Coast Guard believes that follow-on discussions with members of the crew and interactive discussions provide insights into the specific functions of emergency procedures aboard a particular ship and allow crew members to individually and collectively discuss specific actions and expectations of each other during drills or actual emergencies. Further, to ensure that the alternative form of instruction is sufficient, we amended § 140.420(e) by

adding requirements that a competent individual provide a demonstration using equipment that is the subject of the training.

We received several comments on § 140.420(d). An individual noted that "rescue boat" was not defined in § 136.110. The commenter questioned whether the Coast Guard was using the terms "skiff" and "rescue boat" synonymously in § 140.420(d) and requested that the Coast Guard define "rescue boat" if "rescue boat" and "skiff" were intended to be different vessels. Another commenter felt that requiring a safety orientation for crewmembers to be conducted annually as proposed in § 140.420(d)(1) was unnecessary and burdensome.

The Coast Guard recognizes "skiffs" and "rescue boats" as different types of vessels and did not use them interchangeably in § 140.420(d). The Coast Guard agrees that "rescue boat" should be defined and has amended § 136.110 to provide a definition.

As for the second comment, the Coast Guard agrees and has removed proposed § 140.420(d)(1), which contains the requirement for an annual safety orientation. The requirements for when a safety orientation should be conducted can be found in § 140.410(b). The Coast Guard has amended that paragraph to clarify that a safety

orientation is required for a crewmember prior to that crewmember getting underway for the first time on a particular towing vessel. Also, in § 140.410(c) we corrected a reference to "new vessel," by switching it to "other vessel" regarding requirements for safety orientation provided to crewmembers who received a safety orientation on another vessel. Furthermore in § 140.410(d) we amended paragraph (d)(3) to require the signature in addition to name of those providing training.

In reviewing § 140.420(d), we added paragraph (d)(5) which states that credentialed mariners holding an officer endorsement do not require the instruction listed in paragraph (d) with the exception of launching a skiff, if one is listed as an item of emergency equipment to abandon ship or recover persons overboard. We added a similar provision in § 140.645(c) for credentialed mariners holding Able Seaman or officer endorsements regarding navigation safety training requirements in § 140.645. These changes allow credentialed mariners to use their previous training to meet specified subchapter M training requirements.

One commenter suggested that the term "work vests and anti-exposure work suits" be used instead of "work vest" in § 140.430 because anti-exposure work suits are also approved under 46 CFR 160.053.

The Coast Guard does not agree with this suggestion. Vessel personnel are afforded three choices of approved equipment that they may use. In § 140.430 the Coast Guard addresses the wearing of work vests and states that life jackets, immersion suits, and work vests must all meet applicable regulations. The term "anti-exposure work suit" does not appear within 46 CFR subpart 160.053. The Coast Guard has made no changes from the proposed rule based on these comments.

We received several comments requesting that § 140.430 permit type III Personal Flotation Devices (PFD) as an alternate to work vests. One commenter requested that work vests worn at night not require a light.

Section 140.430 provides the standard requirements for the wearing of work vests; however, companies can require the use of approved flotation devices that are of a higher type rating. The Coast Guard does not agree with the comment requesting the removal of the lighting requirement for work vests worn at night as this is an important safety feature for night time operations. We note that we did amend a reference in § 140.430 to a paragraph in § 141.340 based on amendments we made in § 141.340; we changed the paragraph reference from "(c)" to "(g)(1)."

We received several comments opposing the requirement in § 140.435(b) and (c) for small crews and low-risk environments to maintain automatic external defibrillators (AEDs) on board towing vessels. Commenters, including maritime companies, felt the proposed requirement should be removed because subchapter T, which applies to vessels in higher risk environments, does not require AEDs. Others felt that the cost of the equipment and training would be a burden on small companies. A maritime company requested that harbor boats be exempted from the requirement because of the emergency response personnel and land-based assistance available. Also, we received several comments that supported the requirement and need for AEDs on towing vessels. An individual suggested clarifying that the intent of the requirement is for vessels that are "double crewed" and not those containing "overnight accommodations." Two commenters suggested that the training for AED use should be left to the manufacturer's recommendations.

Due to the comparatively high cost of the carriage (estimated by the Coast Guard at \$2,500 per unit for each vessel), maintenance, and training of AEDs on board towing vessels, the Coast Guard has decided to remove the AED requirements proposed in § 140.435(b) and (c). However,



companies can elect to carry, maintain, and train crews on equipment above and beyond the scope of subchapter M requirements. Owners and managing operators can address AED carriage using a risk-based approach through the requirement to implement procedures to identify and mitigate health and safety hazards in § 140.510.

We received some comments on safety concerns that were not included in the NPRM. Two commenters noted that the NPRM does not include the safe remediation of asbestos and suggested either referencing OSHA regulations or other related code in the rulemaking or drafting our own regulations and adding them to the rulemaking. A commenter also expressed concerns regarding carbon monoxide exposure from exhaust leaks in the towing vessels and suggested that the Coast Guard include guidance on protection against carbon monoxide exposure.

Another commenter suggested that the Coast Guard implement a "No Smoking" policy for mariners. The same commenter and an individual requested that Coast Guard institute hearing protection programs as well. Similarly, a commenter suggested that the Coast Guard implement additional occupational safety and health regulations to protect mariners from accidental injury or death.

Another commenter said that the regulations should incorporate effective means of "severing or releasing" a chain or wire rope tow connection in the case of emergencies, noting that a fire axe cannot effectively cut such towline. Lastly, two commenters provided several suggestions for additional workplace safety regulations such as preventive maintenance programs, the incorporation of the OSHA personal injury reporting system instead of CG-form 2632 for personal injury reporting, and a hearing protection program for mariners comparable to OSHA standards for shoreside workers.

With regard to mariner safety, the Coast Guard is committed to the safe operation of vessels and the protection of mariners. Section 140.510 establishes the requirements for owners or managing operators to implement procedures to identify and mitigate health and safety hazards aboard towing vessels subject to inspection, which can include exposure to asbestos, smoking, noise, carbon monoxide, and the ability to sever or release wire or chain towlines. Regarding the comment on the use of the CG-2692, this rule implements a casualty reporting regime consistent with the requirements for other classes of inspected vessels. Further, this final rule requires that the owners and operators of these vessels develop and implement their

own health and safety processes and procedures - see subpart E of part 140. The OSHA standards for shoreside workers could be used as a template for this purpose. The Coast Guard has made no change from the proposed rule based on these comments.

Finally, the Coast Guard disagrees with the comments regarding the incorporation of OSHA standards. As we noted in the NPRM, OSHA's jurisdiction on the workspace safety aspects for seamen on towing vessels subject to subchapter M will cease. However, we have endeavored to incorporate some of the OSHA requirements into the Health and Safety Plan requirements in the final rule. A commenter's recommendation that Congress transfer certain authority from OSHA to the Coast Guard is beyond the scope of this rulemaking.

We received numerous comments that objected to proposed § 140.520, which would require the owner or managing operator to maintain and provide access to medical records. Several commenters suggested that this section be deleted because medical recordkeeping is not required in subchapter T. Other commenters also felt that § 140.520 conflicted with the Health Insurance Portability and Accountability Act of 1996 (HIPAA), Public Law 104-191, and should be deleted in its entirety, because under HIPAA

employers do not retain medical records on employees containing diagnoses that those employees have not already seen. One commenter suggested that § 140.520(b) be deleted because it conflicted with the patient's right to know and violated HIPAA. Another commenter suggested that the section be revised to emphasize medical records confidentiality requirements that currently exist in Federal law. One commenter felt that the section should clarify what information an employer can give out under HIPAA. One commenter questioned which medical records need to be retained under § 140.520(a). Finally, another commenter suggested we amend § 140.520(a)(1) so as to require that only medical records related to pre-employment physicals, injuries occurring in the course or scope of employment, or medical procedures required by the employer be maintained.

The Coast Guard agrees in principle with the comments and deleted proposed § 140.520 from the final rule. The intent of the requirement was to ensure that owners or managing operators retain records of injuries occurring in the course or scope of employment as a result of a health and safety incident on board the vessel. However, we believe the health and safety plan required under § 140.500 already includes recordkeeping procedures addressing this

issue. Also, we have amended § 140.505(a) to make clear that the owner or managing operator must maintain records of health and safety incidents that occur on board the vessel, including any medical records associated with the incidents, and that upon request, he or she must provide crewmembers with incident reports and the crewmember's own associated medical records.

One commenter suggested that the Coast Guard establish food sanitation regulations in the final rule and felt that sanitation regulations, including food sanitation, should be enforced with recognized standards using an inspection checklist. The Canada Shipping Act was cited as an example.

The Coast Guard does not agree that additional regulations are required in the final rule to address the issues of food sanitation aboard towing vessels. As we proposed, this rule requires that the owner or managing operator of the towing vessel to establish policies regarding sanitation and safe food handling. These requirements may be found in § 140.510(a)(13).

Additionally, the Coast Guard has the authority during normal inspection activities to issue corrective action orders to a towing vessel to improve any unsafe condition, including unsanitary food conditions, and under § 137.220,

the owner or managing operator of a towing vessel that has selected the TSMS option must examine or have examined systems, equipment, and procedures to ensure that the vessel and its equipment are suitable for the service for which the vessel is certificated, including being in compliance with part 140 of this subchapter. The Coast Guard has made no change from the proposed rule based on this comment.

A professional association noted that the potable water supply for vessels should be maintained at the same quality as for the Coast Guard's military and civilian employees. The commenter suggested that the Coast Guard issue regulations in this rulemaking that are reasonable and attainable by towing vessels. Two commenters suggested that if the water supply aboard a vessel does not satisfy tests for quality and purity the vessel owners must provide bottled water for the crew members.

The Coast Guard agrees that the condition of water supply aboard towing vessels should be of a sufficient quality that the members of the crew are not endangered. Under 46 U.S.C. 3305(a)(1)(D), the inspection process ensures that vessels subject to inspection have an adequate supply of potable water for drinking and washing. In the NPRM, the Coast Guard proposed a requirement in §

140.510(a)(13) for the owner or managing operator to implement procedures to identify and mitigate health and safety hazards regarding sanitation and safe food handling. Having an inadequate supply of safe water for sanitation purposes and for food handling is to be addressed by the owner or managing operator. To ensure that potable water is expressly addressed in § 140.510, and that there is an adequate supply of potable water for drinking, we have added a potable water supply requirement as § 140.510(a)(14).

One commenter felt that the proposed requirements in § 140.515(b) for training for individuals, other than crew members, should include more specifics on the information or training required, such as fire training and abandon-ship training. Another commenter suggested that the refresher training in § 140.515(d) be repeated every 5 years, rather than annually, because annually was excessive.

The Coast Guard does not agree that additional information on the information and training required for persons aboard towing vessels other than crew members is required in this rule to address the commenter's concerns. In § 140.415, the Coast Guard requires that individuals who are not crewmembers on board towing vessels must receive

additional safety orientation prior to getting underway or as soon as practical thereafter to include issues of use of life-saving equipment, emergency procedures, emergency communications with crewmembers in case of an emergency, and prevention of falls overboard. Under § 140.515(b), the Coast Guard requires owners or managing operators to identify, specific to their towing vessel's operations, what other information or training is needed to limit the exposure of individuals to hazards onboard the vessel.

The Coast Guard believes that annual refresher training is necessary but, as reflected in § 140.515(d), the refresher training does not need to be as in-depth as the initial training. These annual training requirements parallel or mirror comparable OSHA requirements which currently apply to uninspected towing vessels. Companies have the ability to tailor this training to be less comprehensive based on the risk. We made no changes from the proposed rule based on these comments.

We received comments from individuals and companies who felt that the proposed requirement in § 140.610 to close all exterior openings on the main deck is not feasible when vessels require ventilation during hot weather, and not necessary in low water where there is no current.



Others contended that stability is not an issue on inland waterways, and that there should be no stability requirements for Western Rivers towing vessels.

The Coast Guard believes that watertight integrity and stability is a concern on any vessel, regardless of service or operating area. Towing vessels must be maintained and operated so the watertight integrity and stability of the vessel is not compromised. There is a sufficient body of historical evidence regarding towing vessel casualties in which the cause of the casualty was the lack of watertight integrity of the towing vessel. Specifically, open hatches have permitted the uncontrolled ingress of water into the towing vessel, resulting in the vessel sinking.

Within their final report on "Recommendations for the Enhancement of Towing Vessel Stability" dated September 9, 2013, TSAC provided a safety recommendation to the Coast Guard, that towing vessel operators should "close and dog watertight hatches during towing operations" to minimize the risk of down-flooding and progressive flooding of the towing vessel.

We have provided appropriate exceptions to the requirements in § 140.610(c)(1)-(3) to give sufficient flexibility to the vessel's master for crew comfort and convenience. The Coast Guard has made no changes from the

proposed rule based on these comments. However, in reviewing § 140.610 on hatches and other openings, we added an express requirement, previously implied in that section, that decks and bulkheads designed to be watertight or weathertight must be maintained in that condition.

Some commenters suggested that proposed § 140.610(b) be revised as follows, "The master must ensure that all hatches, doors, and other openings that were installed to be watertight and weathertight are functioning properly."

With one amendment, the Coast Guard agrees with the suggested revision. The intent of proposed § 140.610(b) was that any fittings that crews rely on for watertight integrity and vessel safety should be operational and subject to survey. Our revision of § 140.610(b) is intended to make two things clearer. First, this paragraph covers hatches, doors, and other openings designed to be watertight or weathertight, whether or not they are currently watertight or weathertight. Second, the reference to "other openings" in this section is also intended to be limited to those designed to be watertight or weathertight.

One commenter recommended that proposed § 140.615(a) apply to all towing vessels. Another company suggested

that this section only apply to vessels that are not subject to 33 CFR 164.80 regulations.

Because it would be redundant to apply § 140.615 to towing vessels subject to 33 CFR 164.480, the Coast Guard agrees with the second commenter and has not made any changes to the applicability of § 140.615 except that we replaced the term "inspection" with "examination" to avoid using different terms to describe the same action.

An individual suggested that repairs, such as repairs to navigation lights or whistles, need not be recorded as required in proposed § 140.620(d).

The Coast Guard disagrees with the commenter's suggestion that the repairs to navigational safety equipment need not be recorded. The Coast Guard believes that a record of repairs made to navigational safety equipment is a vital component of good management and recordkeeping. Documentation of repairs made to such equipment is vital to identifying systemic issues affecting the navigational safety equipment.

Additionally, if the vessel is operating in accordance with the safety management system, documentation of repairs made would serve to provide an account of materials needed and requested as well as corrective actions taken in order to address the observed deficiencies. The Coast Guard has

made no changes from the proposed rule based on this comment.

We received comments from a State government and a task force asserting that the Coast Guard should add language to § 140.620 requiring that vessels carrying oil or hazardous material in bulk immediately notify the COTP or OCMI when navigational safety equipment fails and cannot be immediately repaired.

The Coast Guard does not agree with the commenters' suggestion that additional requirements for reporting are necessary in this rulemaking. In accordance with 33 CFR 164.53(a), a towing vessel may continue to the next port of call should navigation safety equipment fail, subject to the direction of the District Commander or the Captain of the Port as provided by 33 CFR part 160. A towing vessel is required by 33 CFR 164.53(b) to report to the Coast Guard the loss of critical navigation safety equipment to include radar, radio navigation receivers, Gyro compass, echo-depth sounding devices, or primary steering gear. The Coast Guard believes that these existing requirements are sufficient to ensure safety for towing vessel operations, and we have made no changes from the proposed rule based on these comments. We inserted examples of navigation safety equipment in § 140.620(c), but left the repair-promptly

requirements in that section clearly applicable to all navigation safety equipment.

Similarly, after further review of § 140.625, the Coast Guard decided not to repeat the list (of topics for special attention) already contained in 33 CFR 164.78; instead we refer to that CFR section in a note, and point to the TSMS, where such a list is more appropriately maintained.

We received several comments, from maritime companies and individuals who felt that proposed § 140.630 should be deleted from the NPRM. Several companies felt that because lookouts are included in Rule 5 of the Inland and International Navigation Rules (33 CFR 83.05), the section is redundant for subchapter M. Two commenters suggested that because lookouts for inspected crew boats are not required in subchapter T, they should not be required in subchapter M. An individual asserted that the words "dedicated" or "designated" should be included before the word "lookout" to make it clear that a lookout position would be in addition to a watch-standing officer. A State government and task force member supported a second person for bridge watch for all towing vessel tank barges carrying oil or hazardous material in bulk.

The Coast Guard does not agree that the requirements of proposed § 140.630 should be altered or removed from the rule. The Coast Guard agrees that Rule 5 of the Navigation Rules clearly identifies the need to maintain a lookout at all times while underway. The Coast Guard believes that the additional language provided in § 140.630 ensures that owners and managing operators of towing vessels have greater clarity on expectations and thresholds of performance for the placement of additional lookouts to maintain a state of vigilance whenever significant change in the operational environment occurs. This section makes clear that responsibility for navigational safety rests with the master and mate (pilot) of the towing vessel. Subchapter M establishes requirements for a class of vessels that have different operational risks than those covered by subchapter T. As for the requirement for a second person for bridge watch for all towing vessel tank barges carrying oil or hazardous material in bulk, the Coast Guard believes that § 140.630 gives the Master the proper authority to establish an appropriate number of lookouts based on the conditions and other factors. To clarify the interaction of Rule 5 and 46 CFR 140.630, the Coast Guard has made changes from the proposed rule based on these comments.

We received a comment suggesting that because navigation assessment is covered in other regulations, it should be eliminated from § 140.635. The commenter felt that because navigation watches are included in Navigation Rules 6, 7(a) and 8(a), it would be redundant to include them in subchapter M. Companies also stated that a navigation assessment should not be required in subchapter M because it is not required in subchapter T.

The Coast Guard does not agree with the commenter's suggestion to remove § 140.635. The requirements of § 140.635 provide additional guidance and requirements for the vessel's master or mate (pilot) to ensure that the proper planning is conducted and that sufficient resources, personnel and equipment are available to mitigate the identified risks. In addition, subchapter M establishes requirements for a class of vessels that have different operational risks than those covered by subchapter T. The size of a towing vessel's tow may be large and continually changing, and more challenging to navigate than a small passenger vessel which has a consistent size. Also, varying heights of the tow - the tow's air draft - must be considered to determine if a tow is low enough to clear bridges along the towing vessels intended route. In contrast, the height of small passenger vessels normally

remains constant. The Coast Guard has made no changes from the proposed rule based on this comment.

Two commenters felt that a navigation assessment should be included in a company's TSMS and not included in the final rule. We received some comments that were in support of this provision. Three commenters suggested that navigation watch assessment language should be revised in accordance with the 2006<sup>4</sup> or 2008<sup>5</sup> TSAC recommendations on navigation watch assessments. An individual suggested that only vessels that transit in large areas should be required to have a navigation watch assessment. Two commenters felt that it was too burdensome to conduct and document a navigation assessment for each voyage the vessel makes in a watch.

The Coast Guard disagrees with the commenters' suggestion that the requirement for a navigation assessment should not be included as part of this rule but rather, be required in the company's TSMS. Not all companies or vessels are required to have a TSMS. Therefore, we have included these requirements here in part 140.

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<sup>4</sup> Report of the Towing Safety Advisory Committee Working Group on Towing Vessel Inspection, Task #04-03, Inspection of Towing Vessels, Sept. 7, 2006, docket ID no. USCG-2006-24412-0004.

<sup>5</sup> Memorandum from the Towing Safety Advisory Committee Economic Analysis Working Group, Dec. 16, 2008, docket ID. No. USCG-2006-24412-0007.



The Coast Guard disagrees that the navigation assessment requirements will be overly burdensome. As noted by another commenter, the activities in the navigation assessment are required by Navigation Rules 6, 7(a) and 8(a), and the best practice of prudent seamanship. In the cases where the navigation assessment is not being fully implemented as current practice, we estimate that an additional 0.2 hours per operating day of effort would be needed to meet the requirements in the final rule. We believe that subchapter M requirements for conducting navigation assessments prior to getting underway or while underway will ensure that officers in charge of the navigation watch have the most up-to-date information in order to assess operational risks as well as to anticipate and manage workload demands during the voyage.

The Coast Guard believes that the requirements for the navigation assessment have taken into account the safety recommendations and other guidance received from TSAC. The TSAC recommendations were based on the premise that the details of the navigational assessment requirements would be contained in the TSMS. However, not all vessels will be under the TSMS scheme. Therefore we are separately including the navigation assessment requirements here. The core elements of the recommendations, to identify risk and

to take into account the unique characteristics of the tow, are included in this rule.

Finally, the Coast Guard does not agree with the commenter's suggestion that only vessels that transit in "large areas" should be required to meet this requirement for navigational assessment. The term "large areas" does not provide sufficient information to determine the boundaries envisioned by the commenter. Furthermore, navigation assessments have value not only for transits of large areas or of prolonged duration but also for transits in smaller areas or of short duration; shorter transits may also contain risks such as bridges, high winds, or swift currents. This requirement reflects good seamanship and best practices, and does not pose an undue burden to the mariner. The Coast Guard has made no changes from the proposed rule based on this comment.

A State government and task force suggested that the Coast Guard require vessels towing tank barges that carry oil or hazardous material in bulk to develop a coastal and inland checklist to determine if weather conditions make it safe to proceed, and require personnel to complete the checklist before departure and retain it for Coast Guard inspection. These commenters also suggested we add language to proposed § 140.625 to require a qualified

licensed officer to be in charge of the navigation of the vessel, as stated in 33 CFR 164.11.

The Coast Guard does not agree that additional language is required to address the commenters' concerns. Required tests, examinations, and assessments for personnel operating towing vessels are provided in §§ 140.615 and 140.635. Section 140.635(a)(3) specifically requires that the person in charge of the navigation watch assess the "weather conditions and changes anticipated along the intended route" prior to getting underway. The Coast Guard believes that § 140.635(a)(3) and other required considerations of the navigation assessment are sufficient to reduce operational risks and enhance the safety of the towing vessel and its tows.

The Coast Guard notes that § 140.625 clearly states that at all times, the movement of a towing vessel must be under the command of a credentialed mariner. The commenter correctly notes that existing regulations require a credentialed master or mate (pilot) to be in control of the vessel at all times while underway. The inclusion of additional language would not enhance the safety of towing vessel operations. The Coast Guard has made no changes from the proposed rule based on these comments.

We received several comments from maritime companies that suggested that because other rules address the pilothouse requirements in proposed § 140.640, it should be eliminated. Maritime companies and a trade association felt that the section should be deleted because sufficient coverage of this issue exists in §§ 140.635 and 140.645. Three commenters stated that because § 140.640 is not required in subchapter T, it should not be required in subchapter M. However, three commenters supported this provision. Two commenters felt that § 140.640 should incorporate the requirements in 33 CFR 164.80 instead of the listed requirements.

The Coast Guard does not agree with the commenters' suggestion that the requirements of § 140.640 should be removed from this rule, or that navigation assessment requirements in § 140.635, and § 140.645 navigation safety training requirements, satisfy the objective of requirements in § 140.640 which are specific to pilothouse resource management. Towing vessels have significantly different performance capabilities from vessels regulated under subchapter T. As such, these vessels require greater levels of coordinated action and information transmission between members of the navigational watch team. The TSAC reports and AWO Bridge Allision study as well as casualty

data all identify human factors as a causal factor in a large percentage of casualties. The Coast Guard believes that pilothouse resource management requirements will help reduce navigational risks. While we amended § 140.640 for clarity, and as noted above in this discussion of part 140 comments to address distractions in § 140.210(d), the Coast Guard has made no changes from the proposed rule based on these comments.

We intend this rule to provide - as much as practicable - the requirements for towing vessels in a single subchapter. Not all towing vessels are subject to 33 CFR part 164. For those that are, §§ 140.625 and 140.635 note the need for some vessels to comply with requirements in 33 CFR 164.78 or 164.80.

We do view it as appropriate to tailor requirements in § 140.640 for those vessels subject to subchapter M rather than rely on existing requirements in 33 CFR 164.80. Also, we noted a tension between our statement in § 140.600 that subpart F, Vessel Operational Safety, applies to all towing vessels unless otherwise specified, and our selective repeating of this statement in certain sections. To eliminate that tension, we deleted those unnecessary and somewhat confusing references to applicability in §§ 140.625, 140.635, and 140.640. Also, § 140.600 noted that

some vessels subject to subpart F remain subject to the navigation safety regulations in 33 CFR part 164. Sections 140.625, 140.635, and 140.640, as well as § 140.725, contained statements about 33 CFR part 164 applicability that we removed or moved to a note for the section because this was more informational than regulatory in nature. As discussed later in this preamble, however, we did delete §§ 140.810 and 140.815 and amended § 140.800 to retain and clarify the statement about applicability.

We received several comments from maritime companies who stated that because subchapter T does not require navigation training for deckhands, this training should not be required in § 140.645. A professional association felt that obtaining a license is enough to qualify for navigation.

The Coast Guard agrees in part with these comments. The Coast Guard recognizes that the training requirements in 46 CFR parts 11 and 12, for certain rating endorsements and all deck officer endorsements include the knowledge requirements listed in § 140.645. We included a new paragraph (c) of this section to facilitate a link with the training requirements in 46 CFR parts 11 and 12.

The Coast Guard, however, is also cognizant that not all mariners performing lookout functions are credentialed

mariners therefore, we did not change the rest of § 140.645. Lookout duties may be assigned to crew members aboard towing vessels who do not have a credential as master or mate. Additionally, a crew member may be assigned temporary duties to assist the navigational watch team in the pilothouse during underway operations. It is important that those crew members serving in such capacity have a basic understanding and elementary education in the skills necessary to perform any safety duties assigned to them aboard towing vessel.

One commenter suggested that "fuel" also be included in the list of materials in § 140.655(c) that should not be intentionally drained into bilges.

The Coast Guard agrees that the drainage of fuel into the bilge poses a danger to the safety of towing vessel operations and the environment. Section 140.655(c) prohibits a person from intentionally draining oil or other hazardous material into the bilge of a towing vessel from any source. The Coast Guard intended the reference to "oil or hazardous material" in § 140.655(c) to encompass "fuel," but to make this clear we have added a sentence adopting 33 U.S.C. 1321's definition of "oil" which includes "oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with

wastes other than dredged spoil.” With the adoption of this definition for purposes of § 140.655, we deleted “and fuel” from § 140.655(b) when referencing spills during transfers. To avoid any conflicting requirements, we amended § 140.655(b) (2) regarding oil spill containment capacity to limit it to situations when the requirements in 33 CFR 155.320 do not apply.

We received several comments about § 140.655(c) from companies suggesting that because the prevention of oil and garbage pollution is already a requirement under other rules, such as 33 CFR 155.770, the Oil Pollution Act of 1990, and the International Convention for the Prevention of Pollution from Ships, this section should be deleted.

The Coast Guard disagrees. By expressly stating the requirement in § 140.655(c), we make clear that all vessels subject to subchapter M must comply with this requirement and the requirements stated in 33 CFR 155.770. As previously mentioned, to the extent practicable, the Coast Guard is seeking to present in one subchapter nearly all the regulations with which a towing vessel subject to this rule must comply. This regulation prohibiting the intentional draining of oil or hazardous material into the bilge is one in particular that we want to ensure those subject to subchapter M are aware of. The Coast Guard has



made no changes from the proposed rule based on these comments.

A commenter stated that tests and inspections under provisions of National Fire Protection Association (NFPA) 306, Control of Gas Hazards on Vessels, during repairs including welding, burning, or other hot work were easy to avoid on towing vessels because these vessels were not subject to Coast Guard inspection. Noting that the absence of prescriptive regulations restricts legitimate Coast Guard safety investigations to uncover the cause of accidents, the commenter recommended that the latest edition of NFPA 306, Control of Gas Hazards on Vessels, be incorporated by reference in this rule. Consistent with this recommendation, other commenters urged the Coast Guard to include a requirement for hot work operations and safety that is consistent with requirements for cargo vessels (46 CFR 91.50-1). This commenter also requested that the Coast Guard draft regulations for this rulemaking that govern the proper use of any autopilot installed on a towing vessel similar to those that apply to other classes of inspected vessels.

The Coast Guard agrees that towing vessels should have requirements for hot work operations and safety, similar to cargo vessels, and that the standard recommended is

appropriate and known within the maritime industry. In response to these comments, we added § 140.665 which incorporates by reference portions of NFPA 306 in order to address Marine Chemist inspections required prior to making alterations, repairs, or other such operations involving riveting, welding, burning or like fire-producing actions.

We also added § 140.670 to address the use of auto pilot on towing vessels adopting regulations, as suggested. This regulation is similar to auto pilot regulations that apply to other classes of inspected vessels. We view these additions as needed to ensure the safe operation of towing vessels and as consistent with our proposal for a comprehensive subchapter M.

We received several comments regarding proposed § 140.725. Three maritime companies and a professional association felt that the requirement for a fathometer on vessels along the Gulf Intracoastal Waterway is not needed because the channel is "static and marked," and because the depth of the water only changes by a couple feet. An individual stated that magnetic compasses should be allowed on the Gulf Intracoastal Waterway. Another commenter thought that "electronic position fixing device" was a vague term, and suggested either that it should be defined in § 136.110 or that the definition in 33 CFR 164.41 should

be incorporated in § 140.725(b)(3). This commenter also recommended that any devices installed 1 year after the effective date of the rule be required to be approved under series 165.130.

The Coast Guard does not agree with the commenters' suggestion that a fathometer is an unnecessary piece of equipment aboard towing vessels operating in the Gulf Intracoastal Waterway. The Coast Guard agrees that towing vessels operating almost solely in marked channels regularly maintained and commonly traversed have a high degree of reliability with regard to water depth. However, these towing vessels sometimes deviate from marked channels. A fathometer is a very useful tool in order to ensure that a towing vessel does not run aground and is not damaged.

The Coast Guard notes the commenter's suggestion that a magnetic compass should be allowed on the Gulf Intracoastal Waterway. There is nothing in this rule that prohibits the use of the magnetic compass on board a towing vessel when operating on the Gulf Intracoastal Waterway. In reviewing this comment, we amended § 140.725 by inserting "illuminated" before "magnetic compass" to match the illuminated requirement in that section for that

alternative swing-meter, and to ensure the existing requirement that both must be readable is met.

While there is no specific definition of "electronic position fixing device" found in 33 CFR 164.41, the term is generally now understood to mean a satellite navigation receiver, since that was allowed as a stand-alone means of satisfying the requirement in 1983 (47 FR 58243, December 30, 1982) and the requirement was subsequently amended in 2011 once LORAN-based options were eliminated (76 FR 31831, June 2, 2011).

The Coast Guard does not agree that 33 CFR 164.41 needs to be incorporated in the requirements of proposed § 140.725(b) (3), but we have added a definition of "electronic position fixing device" in § 136.110 that defines the term to mean a navigation receiver that meets the requirements of 33 CFR 164.41. Also, we view the recommendation for approval under series 165.130 as being overly prescriptive to include in this final rule without first seeking comments on that specific proposal.

Note that we reorganized § 140.725 for greater clarity. We decided that paragraph (a) was unnecessary so we removed it, and we made proposed paragraph (b) into introductory text, and paragraphs (b) (1) through (4) became paragraphs (a) through (d).

One commenter suggested that the guidance in CG-543 Policy Letter 10-05 regarding carrying electronic navigation publications on U.S. vessels should be adopted in subchapter M.

The Coast Guard declines to specifically add this language into the final rule; however, on February 3, 2016, CG-NAV published NVIC 01-16, which establishes guidance on the use of electronic charting systems and the carriage of electronic navigation pubs. NVIC 01-16 applies to towing vessels and their requirement for the carriage of navigation publications listed in § 140.705. In examining our reference to "information and equipment" in § 140.705(b), we replaced these words with "charts, maps, and nautical publications," to better reflect the section heading and the existing references in the section.

Another commenter suggested that a note should be included in § 140.705(b)(1) that in the event that only electronic charts are used, the system must be approved by the Coast Guard.

The Coast Guard does not agree. Section 140.705 already requires that if electronic charts are used, that they must be acceptable to the Coast Guard. This allows the Coast Guard to consider the system on which the charts will be displayed when determining if the charts will make

safe navigation possible. The broader issue of electronic chart systems would be addressed in a separate rulemaking. The Coast Guard has made no changes from the proposed rule based on this comment.

One commenter suggested that the final rule should require that officers on watch listen to the Coast Guard Broadcast Notices to Mariners (BNM) and National Weather Service regularly to avoid hazards. The commenter also suggested that "talk-back" capabilities be available for crew members that are out of sight of the watch officer.

The Coast Guard does not agree with the commenter's suggestion to require navigational officers on watch to maintain the suggested radio watch aboard the towing vessel. Existing 33 CFR part 26 regulations address radio watch standing requirements. Moreover, whenever a vessel is operating in a Vessel Traffic Service Area, 33 CFR part 161 provides additional requirements for a towing vessel to maintain a radio watch.

Also, the Coast Guard does not agree with the commenter's suggestion that a "talk-back" requirement be made applicable for crew members that are out of sight of the watch officer. The requirements contained in § 140.640 on pilothouse resource management address information sharing procedures. Further, if the condition of the

vessel or the construction of the vessel prohibits direct communication between the members of the navigation watch team, then it is the responsibility of the vessel owner or managing operator to provide the necessary equipment to ensure that communication is conducted in a manner that provides for safer operation of the vessel. The Coast Guard has made no change from the proposed rule based on these comments.

With respect to § 140.715, one commenter suggested that at least two Very High Frequency (VHF) radios capable of Digital Selective Calling be maintained on board and also that towing vessels operating outside of the VHF range have long-band medium frequency or high frequency radio equipment or a satellite system. Further, the commenter recommended that all towing vessels should be capable of receiving Maritime Safety Information Broadcasts. The commenter warned against provisions allowing cellular radios as an alternative means of required communication function. The commenter also suggested that changes to equipment be required immediately following a first inspection or no later than 5 years from the effective date of the regulations.

The Coast Guard does not agree with the commenter's suggestion. Section 140.715 reflects a performance

standard from current regulations. As required by 33 CFR 164.72, as long as a continuous listening watch is maintained, the vessel is in compliance. It is the responsibility of the master to meet this performance standard. These requirements are identical to those contained 33 CFR 164.72 and 33 CFR part 26. The Coast Guard has made no change from the proposed rule based on this comment.

We received several comments from companies and individuals regarding towing safety in subpart H of part 140. One commenter suggested deleting the responsibilities listed in paragraphs (a) through (c) in proposed § 140.801 and replacing them with language from 33 CFR 164.74.

The Coast Guard does not agree with the commenter's suggestion because 33 CFR 164.74 only addresses towing astern. The Coast Guard has made no changes from the proposed rule based on this comment. However, we have added "or officer in charge of a navigational watch" to the list of parties who may be responsible for meeting the requirements of this section, for greater consistency with similar requirements elsewhere. See discussion of § 140.210 above for more.

With regard to towing vessel horsepower two commenters expressed concern that the determination of horsepower or



bollard pull of the vessel in §§ 140.801 and 140.805 needed to safely maneuver the tow would be subjectively determined by the owner or managing operator of the vessel. One commenter felt that companies were not determining horsepower or bollard pull accurately, and suggested that the Coast Guard require that companies provide a document from the engine manufacturer and certified naval architect that rates the vessel's horsepower using data provided by the maker, the vessel's gear reductions ratio, and the diameter and pitch of the vessel's propeller.

The Coast Guard does not concur. We included a definition of "horsepower" in the definitions section of part 136, and we see no compelling reason to require additional testing that would not be appropriate for all towing vessels. The definition of horsepower requires that the determination of a vessel's horsepower is made by the Coast Guard or a third-party organization during the issuance of the COI, and is made using objective information issued by the manufacturer. The Coast Guard feels that the concerns regarding the determination of adequate horsepower are addressed in other sections of part 140 and are appropriately left to the master's assessment to the specific aspects of the tow, towing vessel's capability, and the prevailing conditions.

The Coast Guard has made no changes from the proposed rule based on these comments.

One commenter suggested that a reference to guidelines from the AWO RCP be included in § 140.801 because the current language of the section left too much discretion to the owners and managing operators of towing vessels. One company suggested edits to § 140.801 that would have rendered it inapplicable to excepted vessels, harbor assist vessels, vessels operating in a limited geographic area, or vessels operating on short hauls.

The Coast Guard does not agree with the commenter's suggestion concerning the inclusion of a reference to the AWO RCP. Section 140.801 requires that the owner, managing operator, or master of a towing vessel ensures compliance with the performance standards in § 140.801. Those with this responsibility may rely on a TSMS, guidance documents, or other sources in deciding how best to meet these requirements.

Also, the Coast Guard does not agree with the commenter's suggestion of altering the applicability of § 140.801. The towing gear in § 140.801 is just as important for those vessels the commenter listed as for other vessels subject to subchapter M. The Coast Guard has made no changes from the proposed rule based on these comments.

We received several comments from companies and a trade association that suggested the deletion of proposed §§ 140.815 and 140.820 concerning the inspection of towing gear and related recordkeeping. The comments suggested replacing these sections with requirements from 33 CFR 164.74 and towline and terminal gear requirements from 33 CFR 164.76. Commenters felt that this change will help reduce confusion between the towing safety regulations and these subparts. Another commenter suggested that we add text to proposed § 140.820 to augment the recordkeeping requirements.

The Coast Guard agrees with the first commenter's recommendations. We have deleted § 140.810 because § 140.615 will require that towing gear be examined before getting underway for all towing vessels not subject to 33 CFR 164.80 already, and we deleted § 140.815 because it was merely informational. We also amended § 140.820 to apply the recordkeeping to the inspections in 33 CFR 164.76 instead of § 140.815 as previously proposed.

The Coast Guard also agrees with the second comment, and we have adopted an amended version of the commenter's proposed change to § 140.820(b). We edited § 140.820 to remove "bridle" from the recordkeeping requirements for examination, because bridles are normally either attached

to or are part of the barge and it would be too onerous for industry to complete this recordkeeping requirement on towing gear not under the continuous control of the towing vessel.

One commenter suggested that the description of TSMS recordkeeping should include the acceptance of electronic recordkeeping as an alternative. Also, a commenter discussing the official log book mentioned the possibility of making false or late entries. A third commenter supported the TSMS and requested that a towing vessel record as defined in § 136.110 be the exclusive form of recordkeeping for all records cited in §§ 137.135, 137.210, and 138.215.

As stated in 46 CFR 140.910(c), TVRs may be maintained electronically or on paper. For towing vessels with a TSMS, however, § 140.910(b) states that another record - other than the TVR, as provided by the TSMS, must be maintained. We agree that this TSMS record may also be in electronic or paper form. But to discourage false electronic entries, we have amended § 140.915(b) to add specific entry requirements for electronic records to include the date and time of entry and name of the person making the entry. If an error is discovered in an entry, any entries to correct the error must include the date and

time of entry and name of the person making the correction and must preserve a record of the original entry being corrected.

With regard to making false or late entries, we note that under 18 U.S.C. 1001, whoever knowingly and willfully makes a materially false, fictitious, or fraudulent statement or representation with respect to reports, records, or verifications required by subchapter M regulations, may be subject to criminal penalties.

Regarding the third comment, the Coast Guard recognizes that a towing vessel owner or managing operator is required to compile records and reports in multiple formats and in separate logs and ledgers. Each of these records have relevance to the TSMS aboard a vessel and are a resource for the auditor and the surveyor to review in order to determine proof of adherence to the requirements of the Safety Management System. The Coast Guard does not wish to impose a regulatory requirement that would result in unnecessary recordkeeping requirements upon industry. Requiring all of these records to be kept in one central record system for the purposes of this rulemaking would be impractical. The owner or managing operator of the towing vessel has the latitude to tailor their Safety Management System to define the method and location of those records

central to the safe operation, repair and maintenance of the towing vessel. We have not made changes from the proposed rule based on these comments.

Two commenters felt that the proposed recordkeeping requirements in §§ 140.905 and 140.910 are not consistent with the 46 U.S.C 11304.

The Coast Guard acknowledges that while the 2010 Act was enacted in October 2010, its requirement for an official logbook in 46 U.S.C. 11304 was not addressed in our proposed rule. We are not, however, amending § 140.905 or § 140.910 in this final rule. We will consider addressing 46 U.S.C. 11304 requirements in a separate rulemaking that would apply to all vessels subject to inspection, and not just those subject to subchapter M. Further, because 46 U.S.C. 11304 makes reference to hours of service, we would again need to consider a separate rulemaking as we would want to seek comments on a specific proposal before implementing those requirements for towing vessels. We have made no changes from proposed § 140.905 or § 140.910 based on these comments.

One commenter expressed concern regarding potential inconsistencies between the unofficial and official Coast Guard logbook forms. The commenter suggested that vessels operating on the Great Lakes should be exempt from the

requirement to maintain an official logbook under § 140.905.

The Coast Guard disagrees with changing § 140.905 to exempt vessels operating on the Great Lakes. The requirement to maintain an official log comes from 46 U.S.C. 11301, and § 140.905(a) reflects the language of the statute, including the exception for vessels on a voyage from a port in the United States to a port in Canada. We did make minor changes to this subpart: in § 140.910(d), we corrected a logbook reference that should have pointed to § 140.905, and in § 140.915 we added a note observing that for towing vessels subject to 46 U.S.C. 11301, there are additional logbook requirements in statute, and that § 140.915 does not alter requirements outside subchapter M to make entries in specific log books.

One commenter suggested that language from SOLAS V, regulation 28, Records of navigational activities, be considered in place of the first sentence of TVR requirements in proposed § 140.910(c). The revision would have replaced proposed language about a chronological record of events with language about activities and incidents of importance to safety of navigation of the vessel, sufficient to restore a complete record of the voyage.

The Coast Guard disagrees. The requirements of SOLAS V are designed to meet the needs of an international seagoing community and provide for much greater depth and comprehensive guidance than that of § 140.910(c). Additionally, the requirements of § 140.910(c) have been tailored for use by the domestic towing fleet and provide a reduced burden upon vessel owners and operators. In proposed § 140.915, however, we have added a reference to tests and examinations that are required by § 140.615. We believe the commenter's concern is addressed by reading § 140.910(c) in combination with the specific reporting requirements of § 140.915, as amended.

We received two comments from towing companies who felt that compliance with subpart I of part 140 would be time consuming and a burden on companies and the Coast Guard.

The Coast Guard acknowledges the documentation requirements of this portion of the rule do require some time and familiarity on the part of the crew. However, we believe the documentation will result in a higher level of operational safety and effectiveness, which improves operational performance. The time invested in complying with the recordkeeping requirements of this portion of the rule is intended to provide sufficient benefits to offset



the time invested. The Coast Guard has made no changes from the proposed rule based on these comments.

Two companies requested that the definition of "towing vessel record or TVR" as stated in § 136.110 be a substitute for the official logbook, CG-706B or CG-706C, required in § 140.905.

The Coast Guard disagrees. Our definition of "towing vessel record or TVR" allows that record to take a variety of forms, "a book, notebook, or electronic record." In § 140.905 of this rule we identify vessels that are required under 46 U.S.C. 11301 to use the official logbook, and in § 140.905(b) we specify the form of the official logbook. We did not propose to alter the form of the official logbook in the NPRM, nor do we wish to do so in this final rule. The official logbook is standardized for all vessels required by statute to have it. The Coast Guard has made no changes from the proposed rule based on these comments.

We received several comments from maritime companies, an individual, and a professional association suggesting that the language in § 140.915 be clarified to state that the items must be recorded in accordance with the TSMS associated with the vessel and not recorded in the TSMS itself. The Coast Guard agrees, and amended § 140.915 to reflect this suggested change.

One commenter asserted that the language in proposed § 140.1005, Suspension and revocation, is too broad and potentially could lead to "outright abuse," in the commenter's words, of mariners for mistakes made without criminal intent. A towing company suggested the deletion of § 140.1005 because it is addressed in 46 U.S.C. 7703.

The Coast Guard disagrees. We believe it is appropriate and helpful to identify penalties that those holding a license, certificate of register, or merchant mariner credential may be subject to. Our language in § 140.1005 is similar, for example, to language in 46 CFR 185.910 in subchapter T. In reviewing § 140.1005(b) in response to this comment, we added a source reference of 46 U.S.C. 7704 in the introductory text of § 140.1005, and paragraph (d) to include a security risk element listed in 46 U.S.C. 7703.

One commenter argued that the marine industry must understand that the Coast Guard will take equal action against both mariners and companies for violations of regulations in subchapter M.

The Coast Guard has a broad range of options to enforce regulations against mariners, companies, or both. The OCMI will conduct an investigation and make determinations as to appropriate course of action, which

may include civil penalties or criminal actions. The Coast Guard has made no changes from the proposed rule based on this comment.

Lastly, a towing company pointed out that the regulations are currently written to assume a male captain and suggested that revisions should be made throughout the regulations to replace gender-specific text with him or her, or his or her.

The Coast Guard agrees. We have amended the text in the final rule to ensure we consistently use gender-neutral language throughout the rule.

#### K. Lifesaving (Part 141)

We received several comments from maritime companies, individuals, and an association regarding lifesaving requirements in part 141. Several comments revealed misinterpretations of the proposed rule, so we have made editorial revisions throughout this part, including some rearranging, restructuring, and renumbering of the text, to improve clarity and readability.

Three maritime companies recommended deleting or revising part 141 because of lack of demonstrable risk justifying additional costs to regulated entities.

The Coast Guard analyzed the casualty data balanced against the costs associated with implementing this rule.

The details of this analysis can be found below in the Regulatory Analysis section of this final rule. As is discussed in more detail there, we found that the benefit of risk reduction was commensurate to the cost or, in some cases, we revised the rule to avoid costs that exceeded the benefit. For the lifesaving requirements in part 141, the Coast Guard estimates the annualized cost to be \$3.2 million, with annualized benefits of \$4.4 million, resulting in a net benefit of \$1.2 million per year. The positive net benefits estimate indicates that the potential risk reduction justifies the additional cost of the part.

The carriage, operation, and maintenance of certain approved lifesaving equipment is a fundamental aspect of being an inspected vessel. The Coast Guard analyzed the costs associated with implementing lifesaving provisions of this rule and concluded that the largest costs associated with the proposed rule arise from the carriage of survival craft, particularly for inland towing vessels. Noting that the operating conditions may mitigate the need for survival craft, the Coast Guard has modified the proposed requirements for survival craft as described below to reduce the impact on the towing vessel industry. The Coast Guard believes that provisions of this final rule represent the minimum requirement for safe operation of an inspected

towing vessel and notes that nothing in this rule would preclude a towing vessel operator from optionally carrying survival craft as excess equipment.

In a comment on part 141, a commenter suggested that all our references to limited geographical areas should be expanded to include vessels operating in harbor services.

In part 141 we proposed that, unless required by the OCMI under § 141.305(c)(5), a towing vessel in a limited geographic area need not carry a survival craft. In this final rule, that provision is reflected in the first area-of-operation column in Table 141.305 of § 141.305 and in footnote 1 of that table. Our definition of "limited geographic areas" in § 136.110 gives the COTP the discretion to determine limited geographic areas in her or his COTP zone. We don't see a need to change that definition based on this comment, which seems more focused on ensuring that vessels engaged in harbor services share the same exceptions as those operating in a limited geographic area. A vessel that engages in harbor services may do so in multiple locations and may not always be operating in a limited geographic area, and is not necessarily exempted from carrying survival craft. A vessel that engages in harbor services within a limited geographic area as determined by the COTP, however, need

not carry survival craft unless required to do so by the OCMI.

In response to general comments about having time to comply with equipment-related requirements in subchapter M, we amended § 141.105 to give existing towing vessels until the earlier of either 2 years from the effective date of this rule or the date the vessel obtains a subchapter M COI to comply with part 141 requirements. We added § 141.105(a)(2) to clarify that the delayed implementation provisions for existing vessels do not apply to new towing vessels. We also revised § 141.105(c) to include a reference to SOLAS Chapter III as this is where specific lifesaving requirements are contained in SOLAS.

Because the reference to functional requirements in proposed § 141.110 only applies to survival craft, we relocated that text to § 141.305. An individual suggested we edit proposed § 141.110 (now § 141.305) by adding "company" to those we identified ("owner or managing operator") who may choose to meet the functional requirements in this part instead of the part's prescriptive standards.

We do not agree. We do not see a need to do so because our § 136.110 definition of "managing operator"

includes organizations and if a company owns the vessel, it would be covered by our definition of "owner."

The same commenter also suggested that the designated approved third party provide written recommendations to the cognizant OCMI regarding the OCMI's acceptance of functional requirements, instead of the third party directly accepting them.

We do not agree. A TPO may consult with the OCMI, but under proposed § 141.110(c) (now § 141.305(c)(2)) the TPO is free to accept a managing operator or owner's chosen means to meet the survival craft requirements of § 141.305, so long as the means are documented in the TSMS applicable to the vessel. We believe these documentation procedures are sufficient and do not see a need for the TPO to provide written recommendations to the cognizant OCMI regarding acceptance of arrangements that satisfy the functional requirements.

We did not receive comments on § 141.115, Definitions, but noted that no new definitions were proposed for this Part, and removed this section. Additionally, as discussed elsewhere in this preamble, in response to requests for clarification on the appropriate approvals for lifesaving equipment, we imported the definition of "approval series" from 46 CFR 199.30 to the definition section for subchapter

M and used that term in part 141 to identify the applicable approval series for each piece of equipment

We did not receive comments on the incorporation by reference section, § 141.120, but we did move the contents of that section into § 136.112 and made § 136.112 the centralized incorporation by reference section for all of subchapter M. In addition, to better organize the various technical standards used throughout subchapter M, we also consolidate central incorporation by reference sections for other parts into § 136.112.

An individual recommended that in § 141.205(a) we add "guidelines, instructions, and define level of authority" to what the TSMS must include in addition to policies and procedures. The same commenter also recommended that in paragraph (b) of that section we require the TSMS to "include procedures ensuring that non-conformities, accidents and hazardous situations are reported to the company, owner, or managing operator, investigated and analyzed with the objective of improving safety and pollution prevention," instead of simply ensuring objective evidence of compliance with the TSMS.

The Coast Guard disagrees. We have deleted § 141.205 entirely because we felt that it was redundant with part 138 in general. As for the commenter's concern, § 138.220,



Towing Safety Management System (TSMS) Elements, requires that the TSMS include documentation of the management organization in detail, personnel management policies, and compliance with other requirements of this subchapter.

We did not receive comments on the general provisions section for part 141, proposed § 141.220 (now § 141.200), but the Coast Guard standardized our approval phraseology both here and throughout this subchapter and also clarified the specific approval required for each equipment type. These edits are consistent with requests discussed below regarding § 141.305 to clarify the appropriate approvals for lifesaving equipment. At the time of their inspection, every towing vessel must be properly outfitted in accordance with the route for which they are certificated. However, we further clarified in new § 141.200(c) that requirements in part 141 are based solely on the areas where a vessel operates.

We did not receive comments on § 141.225, but we found that the provisions of § 136.115 were more applicable to this part and cited this section in new § 141.225(a) to reflect § 136.115's provision that all towing vessels, not just those with a TSMS, may seek equivalencies. Similarly, we redesignated § 136.115(c) as § 141.225(c) to better align the provisions concerning equivalencies of novel

lifesaving appliances or arrangements within part 141. In addition, we restructured 141.225 by replacing proposed paragraph (a) with new paragraphs (a) and (b) to clarify the intent allowing towing vessels to use alternate arrangements or equipment to meet this part. We also amended the heading of § 141.225 to better reflect this section's paragraph (d), which specifies that the cognizant OCMI may require a towing vessel to carry specialized or additional lifesaving equipment.

An individual recommended text edits to § 141.230 that would require the master to ensure that lifesaving equipment is correctly installed in addition to being properly maintained and ready for use at all times.

The Coast Guard does not agree. To the extent improperly installed lifesaving equipment would not be ready for use, the wording of § 141.230 addresses the commenter's concern. We made no changes in response to this comment.

Regarding § 141.235 and the inspection, testing, and maintenance of lifesaving equipment, we received a comment from an association suggesting that the content of 46 CFR 199.190, which we reference in § 141.235, be added as a stand-alone section in subchapter M with modifications to

apply to towing vessel lifesaving equipment and to clearly specify when any necessary factory maintenance is required.

The Coast Guard does not agree. The full text of § 199.190 contains maintenance requirements for various types of lifesaving equipment, including weekly, monthly, and annual inspections and tests for lifeboats, rescue boats, and launching appliances. The majority of towing vessels will not carry this equipment. Therefore, the inclusion of the complete text of § 199.190 in subchapter M would add little value. However, § 141.235 points the operator to § 199.190 where he or she can search for the relevant testing and maintenance requirements for vessels that carry this equipment. In § 141.235, we replaced the word "examination" with "inspection" to be consistent with other related Coast Guard regulations. Also, seeking consistency with a similar provision in § 142.240, we set the records retention period to at least 1 year after the expiration of the Certificate of Inspection.

We received several comments regarding Table 141.305 - Survival Craft. One commenter requested that all towing vessels be equipped with an out-of-water survival craft, like an inflatable buoyant apparatus. An individual felt that life floats and buoyant apparatus references should be deleted from the table, with the exception of references in

footnotes. A trade association and individual noted two terms that should be changed; "life floats" because it was ordered removed by Congress by January 1, 2015, and the term "buoyant apparatus," which was suggested to be replaced with "approved buoyant apparatus" in order to comply with proposed § 141.305(c)(6). Another commenter suggested that we edit proposed § 141.305(b)(6) and (c)(6) by replacing "By 2015," with "After December 31, 2014," when specifying when survival craft may no longer be carried on board unless the craft ensures that no part of the individual is immersed in water.

On February 8, 2016, section 301 of the Coast Guard Authorization Act of 2015 (2015 Act), Public Law 114-120, 130 Stat. 27, revised 46 U.S.C. 3104. The deadline in our proposed § 141.305(b)(6) and (c)(6), and § 141.330(g), for a new standard for survival craft to meet to be eligible for approval - "must ensure that no part of an individual is immersed in water" -- was based on provisions previously specified in 46 U.S.C. 3104. The 2015 Act limited those standards for survival craft to passenger vessels. We have therefore removed references to the deadline and those standards in § 141.305(b) and (c), and § 141.330, and made edits to align the language with the remaining functional requirements for survival craft.

We developed the cost estimates for part 141 under the requirements of 46 U.S.C. 3104 before it was amended by the 2015 Act. Specifically, we posited that owners and operators of the affected vessel population would only use inflatable buoyant apparatuses to comply with the out-of-water mandate. To the extent that affected owners and operators take advantage of the relaxation of equipment requirements provided by the 2015 Act, this will result in an over-estimate of the cost of survival craft in this rule's regulatory analysis.

As recommended, we deleted the terms "buoyant apparatus" and "life float" from the Cold Water Operation portion of Table 141.305 because neither of these items satisfied the minimum requirements for a vessel operating in cold water. In the Warm Water Operation portion of the table we removed the rows for life float and inflatable buoyant apparatus because they are not specifically called out to meet the minimum carriage requirements although they can be used as a substitute for a lower safety precedence survival craft as described in § 141.305(d). To avoid possible confusion with "inflatable buoyant apparatus," we changed "buoyant apparatus" to "rigid buoyant apparatus" throughout the final rule. Also, to accurately reflect the safety precedence hierarchy of survival craft, we moved

Inflatable Liferaft with SOLAS A pack to the bottom of each list.

Also, we have revised the requirements for carriage of survival craft to exclude vessels operating in protected waters, which we have defined in § 136.110, unless survival craft are deemed necessary by the OCMI, and we have revised § 141.305(d) to allow for non-approved survival craft to be carried as excess equipment where no survival craft are required by this part, provided that the equipment is in good condition and maintained according to manufacturer's instructions.

In order to further clarify the options for complying with the functional requirements for survival craft, we have added a new paragraph to § 141.305, which includes text relocated from proposed § 141.110. Under the new § 141.305(c), the two options for complying with the functional requirements for survival craft are meeting the prescriptive requirements in § 141.305(d) or employing alternative means, acceptable to the OCMI or TPO, and documented in the TSMS, if applicable.

A towing company suggested that the table include "Rivers and Canals" as an area of operation.

The Coast Guard does not see a need for this suggested change. Table 141.305 currently lists "Rivers" as an area

of operation and the definition of "rivers" in § 136.110 includes canals.

Another commenter suggested removing all rows from the table where equipment is not required. The same commenter suggested that operations that are exempt from specific equipment requirements be indicated by the word "none" in the appropriate field in the table. The Coast Guard agrees, and has revised Table 141.305 accordingly.

We received several comments regarding the footnotes in Table 141.305. Several commenters, including towing companies and associations, suggested deleting proposed footnote 1 that referenced survival craft determinations by the cognizant OCMI or as a requirement deemed necessary in the applicable TSMS. Alternatively, an individual suggested that a towing vessel operating in "limited geographic areas" be permitted to operate without survival craft.

According to footnote 1 of Table 141.305 in the final rule, survival craft are not required on towing vessels operating in limited geographical areas, "unless survival craft requirements are determined to be necessary by the cognizant OCMI or TSMS applicable to the towing vessel." Though the Coast Guard does not support requiring survival craft on towing vessels operating in limited geographic

areas, unless the OCMI or TSMS deems them necessary under § 141.225, operators of these vessels are welcome to carry properly maintained survival craft as excess equipment. A towing company recommended that towing vessels operating within 1 mile of the shore should not be required to have survival craft, unless determined necessary or if it is required in the TSMS for that particular towing vessel. A maritime company suggested deleting the text, "unless determined to be necessary by the cognizant OCMI or a TSMS applicable to the towing vessel," from proposed footnote 6, but didn't provide any reasoning for this suggestion.

The Coast Guard does not agree with the proposed amendment to footnote 6. We believe this provision in proposed footnote 6 is appropriate because the OCMI (or author of the TSMS) should be able to evaluate any extenuating circumstances associated with the towing vessel's operation that would require a survival craft when in general they are not needed when the towing vessel is operating within 1 mile of shore. As noted below, however, based on another comment we did move the text of this footnote to § 141.305(d)(3)(iii).

Several commenters suggested that footnotes 5 and 6 in the table be moved into the regulatory text, and one



commenter recommended deleting the reference to OCMI approval when moving the text of footnote 6.

We agree that the content of proposed footnotes 5 and 6, as well as footnote 4, should be moved into paragraph form in the regulatory text to aid the reader. Therefore, we have inserted the provisions of these footnotes into paragraphs (d)(3)(i)-(iii) of § 141.305. We disagree, however, with deleting the reference to an OCMI determination. When moving the content of proposed footnote 6, we did insert the source of the OCMI's authority to make such a determination.

One company suggested that because of fast currents in some waterways, life floats should be permitted to be retained as supplemental approved survival craft for limited applications as approved by the Coast Guard. Because of downriver flow, the time that the crew is in the water, and the time for life raft deployment, the commenter states it would be difficult for crew to swim against the Lower Mississippi River's current to catch the life raft that released and inflated a period of time after the crew member went into the water as would happen with an automatic deployment. This commenter notes that crew members in the water would have a much better chance of

reaching a life float as they and it are swept downriver with the current at the same relative speed.

The Coast Guard acknowledges the commenter's concerns, and in § 141.305(d)(2)(iv) we have permitted a life float approved under approval series 160.027 to be substituted for a rigid buoyant apparatus. Also, proposed § 141.220 would have required lifesaving equipment to be of an approved type, unless otherwise specified. We amended that section, now § 141.200, to specify that lifesaving equipment for personal use need not be approved by the Commandant if it is not required by part 141. We also amended § 141.305(d) to allow the carriage of non-approved survival craft as excess equipment, provided that the equipment is maintained in good working condition according to the manufacturer's instructions.

We edited §§ 141.310 and 141.315 to make it clear that they are applicable to vessels that do not have an applicable TSMS.

As noted in our discussion of comments on § 141.305, the Coast Guard does not agree with the assumption that the vessel and its tow operating more than 1 mile from shore could make it to shore in the event of an accident. Section 141.330 does not impose a separate requirement that "other survival craft" be carried: instead it simply sets

out the requirements for a skiff if the skiff is intended to be used as a substitute for approved survival craft required by Table 141.305. Table 141.305 prescribes the operating areas where an approved inflatable liferaft is required. As noted above, the Coast Guard has included additional text in § 141.305 prescribing the hierarchy of approved survival craft, and giving owners and operators the right to substitute a survival craft of higher precedence. For example, § 141.305(d)(3)(ii) allows an inflatable liferaft approved under approval series 160.051 or 160.151 to be substituted for an inflatable buoyant apparatus or rigid buoyant apparatus. Similarly, an inflatable buoyant apparatus approved under approval series 160.010 or life float under approval series 160.027 may be substituted for a rigid buoyant apparatus (§ 141.305(d)(3)(iii) and (iv), respectively). If the operator would prefer to use a non-approved raft as a survival craft, the functional requirements listed in § 141.305(b) would apply to the raft.

We received several comments concerning the use of skiffs. One individual noted that the proposed rule contained no requirement that a skiff comply with any requirements for safe loading or buoyancy. The commenter

recommended that we amend § 141.330(a) to require compliance with 33 CFR part 183.

The Coast Guard acknowledges that, for practical purposes, recreational boats complying with 33 CFR part 183 will commonly be used as skiffs, but we share the commenters' concern regarding the potential for confusion regarding the requirements for skiffs that are used as survival craft. The Coast Guard has revised § 141.330 to -

- Clarify that skiffs may only be used as survival craft by towing vessels that do not operate more than 3 miles from shore,
- Include the source of the requirements for safe loading and capacity information (33 CFR 183.23), and
- Correct a source reference for marking requirements in paragraph (f) to match the same source we listed in § 141.315 for survival craft.

The same commenter noted that equipment referred to in proposed § 141.330(g) would be approved under 46 CFR part 159, not part 141, suggested that we edit proposed § 141.330(g) to prohibit the carriage of skiffs after December 31, 2014, unless the craft ensures that no part of the individual is immersed in water.

The Coast Guard agrees that reference to the approval of survival craft is inappropriate in part 141, and has removed proposed paragraph (g). Additionally, we have revised the title of § 141.330 from "Other survival craft" to "Skiffs as survival craft."

A commenter also suggested that we not impose size requirements on a skiff because the entire tow or the towing vessel could usually make it to shore for evacuation purposes in any type of catastrophic event, or alternatively we should include an inflatable raft as an "other survival craft."

As already discussed in the context of § 141.305, towing vessels operating in limited geographical areas or on rivers within 1 mile of shore are only required to carry survival craft if the cognizant OCMI determines that they are necessary. However, in other operating areas where we cannot assume that the vessel can make it to shore, a skiff used as a substitute for a survival craft must be capable of carrying all personnel onboard. As reflected in both § 141.330 and footnote 2 of table 141.305, vessels that operate more than 3 miles from shore may not use a skiff as a substitute for a survival craft except for those operating in warm water on the Great Lakes or Lakes, Bays and Sounds.

One commenter listed several factors that should be considered when approving existing and new "skiffs."

However, the Coast Guard does not intend to "approve" skiffs. Provided that the skiff meets the requirements of § 141.330, it may be used as a substitute for approved survival craft, as reflected in Table 141.305.

The same commenter cautioned against using the terms "skiff" and "rescue boat" interchangeably for fear of confusion between the functions of these boats.

As discussed earlier in this preamble, the Coast Guard acknowledges the commenter's concerns and has added a definition for rescue boat in § 136.110. To further reduce confusion, we have removed the proposed references to rescue boat in §§ 137.220 and 140.405, but retained them in § 140.420 to leave training or drill requirements in place for towing vessels that use a rescue boat.

Regarding the sections for lifejackets, immersion suits, and lifebuoys (§§ 141.340, 141.350, and 141.360, respectively), an individual noted that these sections do not contain provisions for vessels electing the Coast Guard inspection option.

We disagree. Sections 141.340, 141.350, and 141.360 do contain the requirements for all towing vessels, whether

they elect the Coast Guard inspection option or the TSMS option.

We received several comments concerning lifejackets. Four commenters requested clarification of the requirements for lifejackets at watch stations. Three maritime companies and an association suggested that one lifejacket per watchstander be required and made accessible. Commenters felt that the requirement to store lifejackets at "watch stations" is difficult to define for deckhands because they are mobile; one commenter stated that the term "watch station" needs to be defined.

The Coast Guard does not believe that we need to define "watch station," but we make clear that lifejackets must be immediately available to those standing watch as well as to other crew. The bridge and the engine control room are examples of watch stations. As specified in § 141.340(b), for towing vessels with berthing aboard, lifejackets would need to be immediately available for watchstanders there as well as at other manned watch stations.

Two commenters asserted that the COI should list the total number of persons allowed on a vessel and state the same number of lifejackets and space in a survival craft be available.

An inspected vessel's COI will state the total number of persons allowed on the vessel as well as applicable lifesaving equipment that is required onboard the vessel. These numbers are based on determinations made by the OCMI issuing the COI.

One commenter suggested that crew on manned barges in the Great Lakes, over 3,000 GRT, should not be required to have work vests because the personnel mostly remain on the barge, which is more stable than a tug. One commenter suggested that the requirement to provide both life jackets and work vests is redundant.

The Coast Guard agrees that the proposed Table 141.335 may have been misinterpreted to mean that work vests were required to be carried as personal lifesaving equipment. Under § 140.430, work vests are not required, but are one of three options for use by personnel dispatched from the vessel or working in an area without rails or guards. We clarified § 140.430 and removed Table 141.335, as discussed above, and we have clarified § 140.430 to indicate the appropriate use of work vests.

Another towing company recommended that proposed § 141.335 should clarify that immersion suits are not required on towing vessels that travel along inland or Western Rivers. The commenter noted that proposed Table



141.335 indicated that immersion suits are not required on vessels travelling on limited geographic areas or rivers, but it does require immersion suits on vessels travelling on lakes, bays, and sounds and that there are many lakes that fit subchapter M's definition of lakes, bays, and sounds along the inland and Western Rivers that are simply part of a vessel's route, or an area to drop off barges.

The Coast Guard disagrees with this recommendation. In our immersion suit requirements in § 141.350, the allowance for towing vessels operating on rivers or in limited geographical areas to not carry immersion suits assumes that rescue or emergency assistance would be close at hand, thus limiting the duration that a person would be immersed in cold water. We cannot make this same assumption on lakes, bays, and sounds. We have not made changes from the proposed rule based on this comment.

The Coast Guard removed proposed § 141.335 and Table 141.335 because they contained the same information as § 141.340 and § 141.350.

We revised proposed § 141.340(d), now § 141.340(c), to clarify that the option to use alternative means to comply with the lifejacket requirements also applies to non-TSMS vessels, and to cross reference back to § 141.225.

Several commenters, including maritime companies, suggested that a paragraph be added to note that lifejackets that are stored on open racks, where the jackets are clearly seen, do not need labels.

The Coast Guard agrees that clarification was necessary, so we have revised and consolidated proposed § 141.340(e) and (f) into new § 141.340(h) to make clear that the stowage location marking requirements only apply to lifejackets stowed in a berthing space, stateroom, or lifejacket container, including those stored in racks in these types of interior spaces. The Coast Guard has made additional editorial revisions to this section to remove redundancies and to locate all lifejacket requirements in this section, rather than cross-referencing 46 CFR subchapter W, and we have made amendments to §§ 199.01 and 199.10 of subchapter W, to clarify that subchapter W does not apply to towing vessels. We also numbered the rows of Table 199.10(a), to aid any possible future edits.

A towing company suggested amending proposed § 141.340(d) to be consistent with TSAC recommendations for stowing lifejackets. This particular TSAC recommendation refers to the TSMS option which allows alternative means to meet the requirements of this section, and also outlines language requiring the approved TSMS to specify the number

and location of lifejackets to facilitate immediate accessibility at normally occupied spaces.

The Coast Guard has reviewed the TSAC recommendations and its proposed edits to draft regulatory text related to lifesaving requirements in their entirety and confirm that our revisions to proposed § 141.340(d) (now § 141.340(c)) are consistent with those recommendations.

We received comments from maritime companies and an association that recommended that the requirement for posting of placards with information regarding use of lifejackets be deleted, and that information in another format be provided on the vessel instead.

While the Coast Guard believes that proper donning and use of the PFD plays a large part in survival, we note that this information is covered by the safety orientation required by § 140.410(b). Accordingly, § 141.345 has been removed from this rulemaking.

One commenter recommended that, at a minimum, each towing vessel should be required to furnish a throwable flotation lifesaving device on the end of each barge or tow available and ready for use at all times to rapidly retrieve a person who falls overboard. The commenter noted that without a "lifebuoy" or equivalent, if a person falls overboard from a single barge tow, the nearest throwable

lifesaving device may be on the towboat itself and may be 100 to more than 1,000 feet and minutes away.

The Coast Guard recognizes the commenter's concern, but the comment is outside the scope of this rulemaking. We note that on September 10, 2014, the Coast Guard published a final rule entitled, "Lifesaving Devices—Uninspected Commercial Barges and Sailing Vessels" (79 FR 53621). In the course of that rulemaking, we discussed and evaluated the feasibility of requiring lifebuoys on barges, and found the costs to outweigh the benefits. However, vessel owners or managing operators may opt to carry additional approved lifebuoys for this purpose.

A mariner's association and an individual believed that efforts towards the protection of personnel from cold weather should include the requirement of anti-exposure work suits for water temperatures below 59 degrees Fahrenheit, as cited in the NVIC 7-91. One commenter suggested that NVIC 7-91 be rewritten to include "cold water" areas found on navigable rivers in addition to its present coastwise coverage.

Consistent with recommendations in NVIC 7-91, we proposed in § 141.350 to require immersion suits for towing vessels that operate north of latitude 32° N or south of latitude 32° S if the vessel does not operate exclusively

on rivers or in a limited geographic area. At these latitudes water temperatures drop below 59 degrees Fahrenheit during a typical year. While the Coast Guard agrees that anti-exposure work suits of the type approved by the Coast Guard under approval series 160.053 or 160.153 provide valuable thermal protection to workers on deck, they are not intended to get wet. Immersion suits are specially tested and approved for thermal protection during prolonged immersion in cold water. As in § 141.340(c) above, we revised the text in paragraph (a)(3) to clarify that the option to use alternative means to comply with the immersion suit requirements also applies to non-TSMS vessels and to cross reference back to § 141.225.

We received several comments, from maritime companies and others, requesting proposed § 141.360(a)(1) be deleted because subchapter M does not apply to vessels less than 26-feet long.

The Coast Guard does not agree. Section 136.105 makes subchapter M applicable to towing vessels of less than 26 feet if the towing vessel is pushing, pulling, or hauling a barge that is carrying oil or hazardous material in bulk, and the requirement in § 141.360(a)(1) - to carry a minimum of one lifebuoy of not less than 510 millimeters (20 inches) in diameter - applies to those towing vessels.

We received several comments from maritime companies and associations suggesting that the required number of lifebuoys on towing vessels be consistent with industry practice. On towing vessels of less than 79 feet, they suggested reducing the required number of lifebuoys to two from the proposed number of three. On towing vessels of more than 79 feet, they suggested requiring four, in lieu of what we had proposed, which was four, plus one on each side of the primary operating station and one at each alternative operating station if the vessel is so equipped.

The Coast Guard agrees that two lifebuoys are appropriate for a towing vessel between 26 and 79 feet in length, and has reduced the required number accordingly in amended § 141.360(a)(2), consistent with lifesaving regulations for inspected vessels of similar size. Similarly, the Coast Guard agrees that the proposed text appears to require more lifebuoys than is practical on a towing vessel of more than 79 feet in length, and has amended § 141.360(a)(3) to clarify the requirement by stating the minimum number of lifebuoys and their placement independently. Also, we removed reference to primary and alternative operating stations. Vessels with more than one operating station will now be required to carry lifebuoys on each side of any operating station, as practicable. We

are aware that some of the operating stations may have limited space available or may not have a way to access the sides. In these cases, owners and operators need to work with the local OCMI to determine an acceptable equivalent for the operating station concerned.

As above in §§ 141.340(c) and 141.350(a)(3), we revised the text in § 141.360(a)(4) to clarify that the option to use alternative means to comply with the lifebuoy requirements also applies to non-TSMS vessels and to cross reference back to § 141.225.

Other commenters, including an association and an individual, recommended that § 141.360 require a specific commercially available throwable PFD, instead of the traditional "lifebuoy" because lifebuoys can only be thrown a relatively short distance.

The Coast Guard has revised § 141.360 to allow for throwable devices approved under approval series 160.050 or 160.150 to satisfy the prescriptive requirements of this section, provided that the vessel is not subject to SOLAS. An approved lifebuoy, or another throwable PFD approved under approval series 160.050 or 160.150 as equivalent to a lifebuoy, would satisfy this requirement. Consistent with specifying performance objectives when possible, rather than specifying the behavior or manner of compliance that

regulated entities must adopt, we did not adopt the commenter's suggestion that we require a specific commercially available throwable PFD.

Regarding proposed § 141.360(b), a company suggested that the reference to release of lifebuoys in § 199.70(a)(1)(v) would not be necessary for most towing vessels, particularly those operating on inland waters. Some commenters also felt that the wording for § 141.360(b)(2) should be rewritten but did not provide suggestions.

The Coast Guard agrees that the requirements of § 199.70(a)(1)(v) is not the most appropriate for towing vessels, and further notes that the cross reference to § 199.70 in § 141.360(b) creates unnecessary confusion as to which requirements apply. The Coast Guard has revised § 141.360 to remove the reference to § 199.70(a) and to include only those requirements that are intended to apply to lifebuoys on towing vessels.

Three commenters felt that § 141.360(b)(2) should be amended to clarify that floating electric water lights are not required for towing vessels operating solely on Western Rivers.

The Coast Guard does not agree. The fitting of lights to lifebuoys increases the likelihood that the person in



the water will be located and retrieved, irrespective of the operating area. However, under revised § 141.360(c)(2) and (3), the floating electric water light is not required for towing vessels limited to daytime operations.

An individual indicated that the proposed rule did not clearly state the floating electronic water light should not be attached to the lifeline.

As noted in § 141.360(c)(4), the floating electric water light is to be secured around the body of the lifebuoy, which is consistent with language applicable to other inspected vessels. The Coast Guard feels that this language in § 141.360(c)(4) is clear.

One commenter felt that using millimeters in proposed § 141.360(b)(3) was unnecessary and could result in an inspector rejecting a lifeline if he or she determined it is only 908 mm in length instead of the required 910 mm. The commenter suggested that we use meters instead of millimeters.

The Coast Guard does not agree. The millimeter equivalents to the 3 and 6 foot standards in the corresponding paragraph of this final rule, § 141.360(c)(3), are consistent with similar regulations for other inspected vessels. See, for example, 46 CFR 117.70 and 180.70. The more precise metric equivalent leaves less

of a gap between it and the English units. The Coast Guard does not see a compelling reason to use a different standard for similar requirements on other types of inspected vessels.

One commenter suggested that the number of alternative lifebuoys be left to the OCMI to decide.

As noted above, we have reduced the number of lifebuoys below what we proposed in the NPRM. We do not believe an appropriate level of safety is met by further reducing that number. Under § 141.225, however, the OCMI may require additional lifebuoys as deemed necessary based on the operating area.

Lastly, an individual asserted that in order to quickly identify lifebuoys as safety equipment, all lifebuoys should be colored orange.

The Coast Guard believes that lifebuoys are readily recognized as lifesaving equipment, regardless of color. However, in § 141.360(b)(5) we require that lifebuoys must be orange on vessels on an oceans or coastwise route, where visibility could be obscured by white caps.

One commenter pointed out that proposed § 141.365 includes procedures in the TSMS for the prompt recovery of a person from the water, and for the training of crewmembers responsible for recovery in effectively

implementing such procedures, applies only to towing vessels under a TSMS and not to vessels that elect Coast Guard inspection. This commenter recommends that the rule also address this issue for towing vessel choosing the Coast Guard inspection option.

The Coast Guard does not agree with requiring these written procedures for those vessels choosing the Coast Guard option. Vessels choosing the Coast Guard option will be required to get underway to conduct drills for a Coast Guard inspector and the retrieval of a man-overboard may be required as part of these drills. Therefore, the procedures and training will be examined through practice rather than through audit of the SMS. However, we did find that proposed § 141.365 was redundant with § 138.215 and removed it from the final rule.

We received two submissions from commenters requesting we add a requirement for specific commercially available person-overboard recovering equipment. One commenter said that recovery equipment to receive unconscious personnel from water should be required.

The Coast Guard is not in the position to require carriage of a specific commercial product. Based on these comments, however, we have added text to § 141.200 to allow a towing vessel to carry additional lifesaving equipment in

addition to that required under subchapter M and that this excess equipment need not be Coast Guard approved. We do not see a need to require the person-overboard recovering equipment, in addition to the lifesaving equipment required in this rule.

One commenter recommended a public hearing to discuss the lifesaving equipment approval process within the Marine Safety Directorate, and to agree on what changes can encourage innovative lifesaving devices for commercial vessels.

This recommendation is outside of the scope of this rulemaking, as this rule applies only to the carriage of approved lifesaving appliances on towing vessels, and does not address the process by which that equipment is approved. We have made no changes from the proposed rule based on this comment.

We received several comments suggesting edits to the Miscellaneous Lifesaving Requirements table, Table 141.370. We received two comments from maritime companies, suggesting amendments to the table clarifying which vessels require six flares and which require 12. One association suggested that in order to be consistent with other table styles, instead of the three columns for Emergency Position

Indicating Radio Beacon (EPIRB) stating "Yes", the columns should just indicate "1".

The Coast Guard agrees that our proposed Table 141.370 is confusing. We have made appropriate revisions to the table and the regulatory text of the first section it references, § 141.375.

One commenter recommended that the table in this section include "Rivers and Canals" as an area of operation.

As we said in response to the same comment regarding Table 141.305, the definition of "rivers" in § 136.110, which applies to the term used throughout subchapter M, includes canals. We have made no changes from the proposed rule based on this comment.

Several commenters suggested that "excepted towing vessels" operating solely on Rivers or Western Rivers be exempt from carrying distress signals. We received several comments, mainly from individuals and maritime companies, who felt that the visual distress signals should not apply to Western Rivers or inland river systems. Another commenter felt that flares and smoke signals required in proposed § 141.375(b) were not needed for vessels operating on rivers one mile wide. A maritime company disagreed with

the requirement for single flares on harbor and fleeting tugs.

The Coast Guard does not agree. The carriage, proper stowage, training, and use of visual distress signals influence survivability of the crew in the event of an emergency that would require evacuation. As we noted above, time to rescue is influenced by the ability to detect persons in distress. If there is insufficient evidence that crewmembers are in trouble, it is less likely they will receive the assistance they need.

One commenter felt that phrases such as, "approved under 46 CFR subpart 160.021 or other standard specified by the Coast Guard" is vague and should instead reference approval series found in 46 CFR 199.30.

The Coast Guard agrees and has revised the regulatory text in part 141 to specify the approval series applicable to all lifesaving equipment required to be approved. The Coast Guard believes that specifying the appropriate approval series assists the vessel owners and managing operators in determining whether specific equipment is approved for a particular application.

We received several comments, particularly from maritime companies, suggesting the deletion of §

141.380(c), which requires identification markings on each EPIRB.

The Coast Guard does not agree. When we find an unattended EPIRB, it is important that we know what vessel it came from, so that we can mount a more focused and effective rescue response.

One company requested an exception from the EPIRB requirement for vessels operating within coastal bays or sounds that may occasionally operate at greater than 3 miles from shore.

In § 141.380, we did propose to require EPIRBs on vessels operating upon the Great Lakes beyond 3 nautical miles from shore but not on vessels operating on lakes, bays, and sounds. The Coast Guard acknowledges the conflict between § 141.380 and Table 141.370, and has made the appropriate revisions to the table to exclude vessels on lakes, bays, and sounds from the EPIRB requirement.

One commenter stated that the requirement for EPIRBs does not mention requirements for hydrostatic release.

We note that § 141.380(b) requires that the EPIRB be mounted such that it will float free if the vessel sinks. Hydrostatic release is one of several methods for meeting this requirement. We made no changes from the proposed rule based on this comment.

One commenter suggested that § 141.380(a) be consistent with NTSB Recommendations M-10-1 and suggested that each EPIRB installed after the effective date of these rules should be a type which includes a satellite position in its distress alert.

The Coast Guard recognizes the merit of enhanced locating devices, but the benefit of adding enhanced GPS locating functionality to an EPIRB does not outweigh the costs associated with making it mandatory for all towing vessels, particularly before it is mandatory for other types of inspected vessels. Though the Coast Guard may consider this matter holistically in the future, we have not made changes to the proposed rule based on this comment. However, this does not preclude a vessel operator from optionally carrying such equipment.

We received comments from three maritime companies that felt that because a tug is able to retrieve a barge without boarding, and because boarding a drifting barge is dangerous, the line throwing requirement in § 141.385 is not needed.

The Coast Guard notes that the line-throwing appliance was only proposed to be carried on towing vessels operating on ocean routes, and is not necessarily intended for boarding a drifting barge. The line-throwing appliance can



be used to pass a line to another vessel if the towing vessel is incapacitated and needs to be towed.

One association suggested broadening the line throwing apparatus requirement to include towing vessels in coastwise service that operate beyond the boundary line.

The Coast Guard agrees that vessels in coastwise service will be subject to similar conditions, and have expanded this requirement to include them, consistent with other inspected vessels (see 46 CFR 199.170 and 199.610). We have amended § 141.385 accordingly.

#### L. Fire protection (Part 142)

The fire protection standards proposed in Part 142 retained most of the fire protection regulations that currently apply to towing vessels and are contained in 46 CFR parts 25 and 27. The public comments received in response to proposed part 142 provided a number of suggestions aimed at improving the clarity of the requirements based on several years of operating experience with the current regulations. We have incorporated many of these suggestions in an effort to make part 142 more user-friendly, and made additional editorial revisions to improve clarity and readability. We also received some comments critical of specific provisions in the NPRM. Most notable are objections to the requirements for flammable

liquid storage cabinets on inland towing vessels, the use of portable fire pumps, the requirements for a professional engineer (P.E.) to certify fire detection systems, and any requirements relating to onboard fire-fighting. Each of these comments is discussed in greater detail in the following item-by-item responses.

In general, the nature of the public comments made it clear to us that the organization of part 142 was confusing and could be greatly improved by placing in subpart B all of the general requirements that are applicable to all towing vessels - such as equipment approvals, fire hazards to be minimized, storage of flammable liquids, portable fire extinguishers, firefighter's outfits, fire axes, and maintenance and training - and placing in subpart C the specific requirements for fire-extinguishing and fire detection systems applicable only to certain vessels. Accordingly, we reorganized part 142 by deleting redundant requirements for fixed fire-extinguishing systems in proposed § 142.235, and moving the requirements for portable fire extinguishers from proposed § 142.305 to § 142.230(d), the requirements for firefighter's outfits from proposed § 142.350 to a new § 142.226, and the requirements for fire axes from proposed § 142.350 to a new § 142.227, but we did not change any requirements, except in response

to public comments as discussed in the following paragraphs. Section 142.235 in this final rule now contains requirements for vessels contracted for prior to November 19, 1952.

With respect to proposed § 142.105 on applicability, one commenter requested that we add text to indicate that vessels exempted from 46 CFR part 27 - which currently applies to most towing vessels that will become subject to subchapter M requirements - need not comply with part 142. We partially agree with this commenter. In § 142.300, we have established that excepted vessels need not comply with the provisions of subpart C regarding fixed fire-extinguishing equipment; our definition of "excepted vessels" in § 136.110 includes many of the vessels excluded from part 27 applicability by § 27.100(b).

But, we do not agree that these vessels should be exempt from the general fire safety provisions in subparts A and B. These requirements implement minimum standards for portable fire extinguishers and control of combustible materials, which we believe are essential on board all vessels. Accordingly, we did not adopt the broad exemption recommended by the commenter.

We revised § 141.205(a) to include a reference to SOLAS Chapter II-2 as this is where specific fire protection requirements are contained.

With respect to § 142.215, one commenter suggested that the installation of excess fire-fighting and fire detection equipment on a vessel must be designed, constructed, installed and maintained in accordance with recognized industry standards acceptable to the Coast Guard. We agree with this comment and have added a paragraph (c) to this section to address equipment that is installed but not required by this subpart. Because there may be existing vessels affected by this, we have included provisions that allow the local OCMI to accept existing equipment of any design as long as it is determined to be in serviceable condition. Additionally, we have clarified the wording regarding approved equipment in order to standardize this language throughout the subchapter.

Several commenters expressed concern that the proposed requirements in § 142.220 appeared to prohibit the presence of any combustible and flammable liquids in the bilges at any time. They noted that the accumulation of some amounts of combustible and flammable liquids in the bilges is unavoidable during normal operations, and requested changes to this section. We agree that small amounts of such

liquids are likely to be present; however, we also want to clearly express our concerns over the accumulation of considerable quantities of liquids that could be a fire hazard. We therefore modified the text of § 142.220(a) to indicate that the bilges should be kept as clear as practical.

Another commenter felt that the proposed requirements in proposed § 142.220(c) (now § 144.415) for the insulation of exhaust pipes and galley cooking equipment exhaust ducts should apply only to new vessels because it would be difficult to retrofit existing vessels, and the risk does not warrant added protection. We do not agree with this commenter, and have not changed the requirement. There have been recent exhaust system fires (discussed in our Safety Alert 05-08, dated September 17, 2008) in which the cause was attributed to the installation of new diesel engines that run at hotter temperatures than previous models. We believe that the potential fire risk is the same on both new and existing vessels. However, to alleviate concerns about installing insulation on the exhaust systems of existing vessels, we have added to § 144.415 two alternate methods of demonstrating compliance. The revised requirement would accept exhaust systems designed to either Standard P-1 of the American Boat and

Yacht Council (ABYC) or Standard 302 of the National Fire Protection Association (NFPA) as equivalent forms of protection. These additional means of protection will provide operators of existing vessels a wider range of choices to comply with the rule. As noted above, proposed § 142.220(c) was moved to § 144.415 as this requirement is more closely related to part 144.

We received several comments objecting to requirements in § 142.225 for approved flammable liquids storage cabinets on boats operating on the Western rivers. These commenters appear to have misinterpreted the proposed rule. We proposed that combustible and flammable liquids be stored in a controlled area, either a specific room or a dedicated storage cabinet. An approved storage cabinet is an option and not a required piece of equipment. Related to this, one commenter recommended that we also accept flammable liquid storage cabinets that are Factory Mutual approved. We agree with the commenter that Factory Mutual cabinets provide an equivalent level of safety as those approved to UL 1275, a voluntary consensus standard used in the NPRM and this final rule, and have added a new § 142.225(c)(2) to accept their use. Another commenter felt that securing the cabinets to the vessel should not be required on the Western Rivers, but offered no

justification for the comment. We acknowledge that vessels operating on the river system are subject to less significant wind and wave motions than are experienced by ocean-going vessels, but do not agree with the commenter that flammable liquid storage cabinets should be unsecured. Any sudden acceleration or movement of the vessel could dislodge the cabinet, causing a flammable liquid spill potentially leading to a fire. We have not made any changes as a result of this comment.

Finally, we received one comment suggesting that § 142.225 should contain information on the storage of hazardous material in ships' stores. We believe these materials are adequately covered by regulations in 46 CFR part 147, which apply to towing and other vessels subject to inspection under 46 U.S.C. 3301, and need not be repeated here.

In § 142.226 (proposed § 142.345), and throughout this part, we changed all references from fireman to firefighter. We also removed the reference to the Mine Safety and Health Administration because this agency no longer approves self-contained breathing apparatus for normal use. A variety of comments were submitted regarding the proposed requirements for the carriage of firefighter's outfits covered by proposed § 142.345 (now § 142.226 as

noted above). One commenter recommended that the proposed standards should be enhanced by listing the specific equipment required for each firefighter's outfit. Others recommended that the requirements for the carriage of firefighter's outfits should be deleted in their entirety, since in their opinion it is too dangerous for crewmembers to enter a burning engine room, and would be better advised to abandon ship in the event of a serious fire.

We have not removed the requirements for firefighter's outfits. We proposed firefighter's outfits for a limited class of vessels. Only vessels of 79 feet or more, operating on ocean or coastwise routes, that do not have a fixed fire suppression system in the engine room are required to carry firefighter's outfits. These vessels are primarily existing vessels that were contracted for prior to August 27, 2003. The Coast Guard believes that these vessels, which operate on the open ocean should have enhanced fire-fighting equipment because timely outside assistance is unlikely, and in the event of an engine room fire the crew must be able to provide onboard response. Vessel operators that believe that fire-fighting poses an unacceptable risk to the crew have the option of installing a fixed fire-extinguishing system in the engine room.



One commenter requested changes to § 142.230 that would allow two size B-III semi-portable fire extinguishers on smaller vessels to substitute for the required B-V extinguisher, which in their opinion, is difficult to handle due to its size. We do not agree with this comment. As noted in the 2004 Fire-Suppression Systems and Voyage Planning for Towing Vessels final rule (69 FR 34064, June 18, 2004), the severity of an engine-room fire is not related to the length of the vessel, but to the fire hazard present in the engine room. The use of marine diesel fuel oil poses a sufficient hazard to warrant the higher fire-suppression capability of a size B-V extinguisher. However, we are concerned that some operators may be installing semi-portable extinguishers that are fitted with wheels. These types of extinguishers are intended for use in shore-side applications and, if used on board vessels, they need to be secured to prevent possible injury to the crew. We have consequently added a supplemental provision to § 142.230(e) that requires that any extinguishers fitted with wheels must be welded or otherwise secured to the vessel.

Another commenter noted that because the NPRM splits discussion of the fire extinguisher requirements between § 142.230 and proposed § 142.305, it was difficult to

determine what is actually required; the commenter requested a single chart with all of the fire extinguisher requirements in one location. We agree with this commenter and have relocated all of the portable hand-held fire extinguisher requirements to § 142.230(d) and deleted proposed § 142.305. The proposed text in § 142.230(d) relating to extinguisher labeling and nameplates has also been deleted, since this is an approval requirement covered by 46 CFR 162.028-3(f) and 162.028-4, and is not appropriate for inclusion here. Requirements for semi-portable B-V fire extinguishers remain in § 142.315.

As previously noted in the general discussion of Part 142, we have deleted the content of proposed § 142.235 because it contained a superfluous requirement that fixed fire-extinguishing systems must be approved by the Commandant, which is already required by § 142.215(a). We also deleted the requirement that carbon dioxide systems must be designed in accordance with 46 CFR part 76, subpart 76.15, because this is covered in the definition of "fixed fire-extinguishing system" in § 136.110.

One commenter suggested that all new installations of fixed fire-extinguishing systems should be required to undergo plan approval by the Coast Guard prior to installation. We do not agree with this comment and have

not changed the proposed rule to require plan approval by the Coast Guard. We believe requirements in § 144.135 are sufficient. That section requires verification of compliance with construction and design standards before a new installation that is not a replacement in kind may be installed. We changed the inspection and testing criteria in Table 142.240 to harmonize this regulation with the Carbon Dioxide Fire Suppression Systems on Commercial Vessels final rule (77 FR 33860, June 7, 2012), a separate rule related to fire suppression systems on commercial vessels that was published after we published our NPRM. We made reference to that ongoing rulemaking and its potential impact on this rule in our NPRM. See 76 FR 49985, Aug. 11, 2011. The Carbon Dioxide Fire Suppression rule revised the vessel regulations to require lock-out valves and odorizing units on all new carbon dioxide extinguishing systems installed or materially altered after July 9, 2013. That rulemaking also changed each of the vessel subchapters to allow the use of clean agent fire-extinguishing systems as an alternative to carbon dioxide systems. Because of this, it was necessary to change the inspection and testing requirements for fire-extinguishing systems in Table 142.240 to include criteria for the inspection and testing of the new clean agents. We have also slightly modified

the definition of "fixed fire-extinguishing system" in § 136.110 to comport with the revised definition in new 46 CFR 27.101.

Additionally, we changed "maintain" to "test and inspect" in the water mist "test" field in Table 142.240, to more accurately reflect the intent of this requirement.

Several comments related to the proposed regulatory text in § 142.240 revealed that this section was confusing and did not clearly convey our intended requirements. During our further review of proposed § 142.240 we noted that the NPRM used inconsistent wording and tended to use the terms "examination," "test," and "maintenance" interchangeably, which contributed to the confusion. We have, therefore, revised the text and format of this section to improve its clarity and consistency. All testing and inspection requirements are stated in paragraph (a), all maintenance requirements are in paragraph (b), and requirements for recordkeeping are in paragraph (c). We have also replaced the word "examination" with "inspection" to be consistent with other Coast Guard regulations.

We received numerous comments requesting that the proposed text of this section be modified to require fire suppression and fire detection systems be inspected or tested annually or in accordance with the TSMS applicable

to the vessel. We agree with this view and have changed § 142.240(a) to require inspection or testing at least every 12 months - as we proposed in § 142.240(c) - or more frequently, if required by the vessel's TSMS.

Several comments also proposed that the TSMS should be the exclusive form of recordkeeping for test and inspection results. We do not agree with this comment. For flexibility, we have proposed that the records may be kept in accordance with an applicable TSMS, the TVR, or the vessel's logbook, whichever applies. We have also added new provisions in § 142.240(c)(2) to accept service tags attached to portable and semi-portable extinguishers by a qualified servicing organization as an acceptable record that demonstrates the required tests and inspections have been completed.

One commenter requested that we replace the phrase "dampers" in proposed § 142.240(c), now § 142.240(a), with "fire dampers." It was not our intent to require the testing of fusible-link fire dampers. The proposed requirement was directed at pressure-operated dampers installed in engine room ventilation ducts. These dampers are automatically operated by the engine room fire-extinguishing system, and must close prior to system discharge to prevent the leakage and dilution of the fire-

extinguishing agent. To clarify what dampers we intended to be tested, we have changed "dampers" to "fixed fire-extinguishing system pressure-operated dampers." We have also added this phrase to § 142.240(a)(5) to clarify that these dampers must be tested as part of the fire-extinguishing system inspection procedures.

One commenter requested a modification to the carbon dioxide cylinder tests required by Table 142.240 that would remove the requirement to weigh the cylinders, and in its place permit the use of liquid level indicators. We do not agree with this requested modification. The Coast Guard has historically required that carbon dioxide cylinders must be weighed to determine the amount of extinguishing agent (see, e.g., 46 CFR 91.25-20(a)(2) and related table), because weighing is the only reliable method to check the quantity of carbon dioxide in the cylinders that the Coast Guard recognizes. Liquid level measuring systems use various types of sensing elements that show the location of the liquid/gas interface within the cylinder. With that knowledge, a technician is able to calculate the quantity of agent. We have no objection to the use of liquid level indicators for checking the quantity of halocarbon clean agents, because a liquid/gas interface can be easily determined. This is not the case with carbon dioxide,

however, which has a critical temperature of 87.8 degrees Fahrenheit. Below the critical temperature, carbon dioxide in a closed container may be part liquid and part gas. Above the critical temperature it is entirely gas, making the use of such measuring devices impractical.

One commenter requested that we change § 142.245 to require all records of training and drills to be kept in the TVR. We do not agree and have made no changes from the proposed rule based on this comment. For flexibility, we have permitted several acceptable recordkeeping methods, in accordance with part 140 of this subchapter.

One commenter questioned the intended extent of the fire detection and alarm system testing during drills required by proposed § 142.245(c)(3). As proposed, the commenter noted, each drill could be understood to require a complete test of the system. This is not our intent. We anticipate that during drills, only the test switch or a single detector needs to be activated to familiarize the crew with the system's operation, and have changed the text of § 142.245(c)(3) to require that only one device needs to be tested.

One commenter requested that the proposed requirements in this section for training crews to respond to fires should be removed from the rule, as the limited scope of

the training would not afford crew members with the necessary skills and knowledge to safely engage in fire-fighting activities. The commenter anticipated that this may result in a false sense of security, leading to injuries for crewmembers attempting to fight engine room fires. Further supporting this argument, it was suggested that the typical practice on inland towing vessels in response to a fire is to attempt "first-aid" firefighting using portable extinguishers or fire hoses. If this fails to contain the fire, the crew would abandon ship to the tow or the riverbank.

Another commenter requested that we strengthen the training requirements by mandating that all licensed officers, apprentice mates, steersmen, and engineers complete formal fire-fighting training courses.

We considered comments on these same issues in a previous rulemaking, the Fire-Suppression Systems and Voyage Planning for Towing Vessels interim rule (68 FR 22607, April 29, 2003), and believed at that time that the level of training proposed in our Inspection of Towing Vessels NPRM would provide crew members with adequate knowledge of the procedures and equipment on board their vessels needed to respond to fires; we have not changed our opinion on this issue based on these comments on § 142.245.



In support of our previous rulemaking, TSAC had performed an independent analysis of our casualty data, which showed that over 80 percent of the reported fires on inland vessels had been extinguished by the crewmembers with only seven reported injuries. (See USCG-2000-6931-0046, available on [www.regulations.gov](http://www.regulations.gov)). Further review of the Coast Guard casualty reports on the vessels where injuries were reported revealed that most of the seven injuries were the result of conditions in the engine room (e.g., burns from the fire outbreak) and were not attributable to fire-fighting efforts.

As previously discussed, in order to make this regulation more user-friendly, we have made various editorial changes here such as moving the portable fire extinguisher requirements previously proposed in § 142.305 to § 142.230(d). We also revised the section heading of § 142.315 to "Additional fire-extinguishing equipment requirements," and amended that entire section to make clear which provisions did not apply to certain towing vessels. In order to account for those vessels operating within 3 nautical miles from shore on the Great Lakes, we revised paragraph (a)(1) of § 142.315. These revisions did not change any substantive requirements proposed in the NPRM.

We received numerous comments requesting that we modify proposed § 142.325(c) to clarify that sufficient hydrants and hoses must be provided to allow "a stream of water from" a single length of hose to reach any part of the machinery space. We concur with these comments and have changed the text accordingly. Associated with this were several comments that the requirement for a single length of hose should be deleted. We do not concur with this, because the single, 15-meter-length-of-hose requirement ensures that a sufficient number of fire hydrants with attached hoses are installed in or close to the engine room. If the fire-fighting water could be provided by multiple sections of hose linked together, (i.e. a segmented hose of unlimited length) a single remote hydrant might satisfy the rule, but the length of hose required would either be too cumbersome to handle in an emergency, not provide the necessary amount of firefighting water due to friction loss, or both.

One commenter urged us to add a new § 142.325(g) requiring a minimum fuel supply stowed onboard to enable 4 hours of operation of the portable fire pump. We do not agree with this suggestion. Paragraph (b) of 46 CFR 27.211 prohibits the carriage of portable fuel tanks and related hardware except when used for outboard engines or when

permanently attached to portable equipment such as fire pumps. Most commercially available portable fire pumps have a fuel tank capable of operating the pump for at least 1 hour. The carriage of supplemental fuel supplies to allow 4 hours of operation would conflict with the provisions of 46 CFR 27.211(b).

Another commenter requested that we remove the requirement for a "self-priming" portable fire pump and require, as an alternative, that a minimum time period be specified during which the crew must be able to demonstrate that their portable pump can be deployed. We do not agree with this comment and have not removed the requirement for self-priming pumps, as non-self-priming pumps are extremely difficult to successfully operate under emergency conditions.

A third commenter noted that in his experience, many crews have difficulties getting the self-priming feature of portable fire pumps to function. We believe this commenter raises a valid point, and have added a new paragraph (c)(5) to § 142.245 to require regular training on the self-priming feature during fire drills to ensure crew familiarity its operation, on vessels equipped with portable pumps.

Another commenter requested that we not accept the use of portable pumps at all, as they are not comparable to fixed fire main systems, and the amount of time it takes to assemble and deploy the pump in darkness or rough weather could compromise mariner safety. We do not concur with this comment because portable pumps were previously allowed for uninspected towing vessels and we do not have data supporting the removal of the option of using cost-effective portable fire pumps. Operators with vessels on routes or in services where the ability to deploy and operate portable pumps could be difficult may choose to install a fixed fire main system as an option.

One commenter recommended that we specify the type of fire hoses required by this section, and urged that we adopt UL 19 as the required standard. We believe that the existing requirement for lined commercial fire hose provides suitable fire-fighting equipment for this purpose. Firehose meeting UL 19 is constructed to a higher standard that would impose unnecessary costs on the industry.

One commenter suggested that § 142.325 require a dedicated sea-chest for the installed fire main. We do not agree with this comment, because a dedicated sea-chest would likely be used only during drills and in emergencies. If the fire main system is connected to a sea-chest that is

regularly used for shipboard services, there is a greater chance that it will be clear of debris or fouling when needed.

During our review of the public comments on § 142.330, we noted that the proposed introductory paragraph of this section was confusing in regard to the fire detection system requirements for towing vessels constructed on or after January 18, 2000. We have clarified and improved the structure of this section by addressing vessels whose construction was contracted for prior to January 18, 2000, separately in paragraph § 142.330(a)(8).

One commenter requested clarification as to whether the audible and visual alarms at the operating station required by proposed § 142.330(c) must be integral to the fire alarm control panel. The Coast Guard's response is that the operating station must have a fire detection control panel installed within the space. However, in the years since the Fire-Suppression Systems and Voyage Planning for Towing Vessels final rule was published (69 FR 34064, June 18, 2004) and incorporated into existing 46 CFR subchapter C regulations, we have become aware that there may be cases where this is a problem on towing vessels with more than one operating station because the fire detection system control panel is not installed at each operating

station. We did not intend to impose an undue economic burden on vessels of this design type by requiring fire detection control panels at each operating station. Rather, one operating station must be outfitted with the fire detection control panel while any others could be outfitted with either fire detection control panels or a remote indicator with audible and visual alarms. We amended the regulatory text of this section to reflect this intent (see new § 142.330(a)(3)).

Another commenter requested that we remove reference to a circuit-fault detector test-switch in § 142.330(a)(4)(v) because currently available fire alarm control panels use internal supervision instead of a test switch to verify circuit integrity. We agree with this comment and have changed this paragraph to accept control panels with internal circuit supervision as equivalent to those having a test switch. We have elected to retain a reference to panels with a test switch to allow flexibility in meeting this provision.

Various commenters suggested that proposed § 142.330(g), which we redesignated as § 142.330(a)(7) in the final rule, should be amended to allow certification of fire detection systems by the National Institute for Certification in Engineering Technologies (NICET) Level IV

technicians in addition to registered P.E.s. We concur with this view and have changed the text of § 142.330(a)(7) accordingly. Level IV technicians are required to have at least 10 years' experience in fire alarm installation and testing and must pass a comprehensive written exam to demonstrate their knowledge. Other commenters requested that we add a qualifying statement to the requirement for a P.E., to ensure that the engineer is qualified to review and certify fire detection systems. We agree and have changed § 142.330(a)(7) to require that any P.E.s or authorized classification society reviewing the system have experience in fire detection system design. It is important to note that all required fire detection systems must be certified and inspected by a P.E., a NICET Level IV Technician, or an authorized classification society including those on vessels that elect or are subject to the Coast Guard traditional inspection scheme under § 137.200. When the Coast Guard inspects the vessel, it will look for evidence that the vessel owner or managing operator has had all required fire detection systems on the vessel certified and inspected by a P.E., a NICET Level IV Technician, or an authorized classification society. We also edited § 142.330(a)(7) to clearly require the system and its installation to be both certified and inspected.

One commenter requested clarification of proposed § 142.330(g), specifically, whether the certifying engineer or technician must review only the detection system equipment and layout drawings, or whether it is necessary to inspect the installation of the fire detection system on board the vessel. We clarified the language in § 142.330, and specify that the fire detection system must be both: certified by a P.E., NICET technician, or an authorized classification society surveyor to comply with paragraphs (a)(1) through (7) of § 142.330; and inspected by a Coast Guard marine inspector or a TPO surveyor, depending upon which inspection regime applies to the vessel, to comply with § 142.330(a)(2). This last reference requires the system to be installed, tested and maintained in accordance with the manufacturer's design manual.

We have substituted the term independent testing laboratory in § 142.330(a)(1) and (8) with Nationally Recognized Testing Laboratory (NRTL) as defined in 29 CFR 1910.7. The proposed term independent testing laboratory is ambiguous and will be replaced with NRTL throughout title 46 CFR upon the finalization of a concurrent regulatory project (see the Harmonization of Standards for Fire Protection, Detection, and Extinguishing Equipment



notice of proposed rulemaking (79 FR 2254, January 13, 2014)).

Please note that we have redesignated § 142.335, Smoke alarms in berthing spaces, and § 142.340, Heat detector in galley as § 142.330(b) and (c), respectively, in the final rule. Multiple commenters urged us to remove from proposed § 142.335 (now § 142.330(b)) any requirements for battery operated smoke detectors in berthing spaces, and instead require smoke detectors that are part of an installed fixed fire-detection system. We do not concur with this suggestion. Battery-operated smoke detectors are not required, but detectors that meet UL 217 may be used as an alternative to satisfy the requirements in new § 142.330(b). We have retained this option in the final rule because it offers a low cost alternative to installing a fixed detection system in these areas.

A commenter requested changing proposed § 142.340 regarding a heat detector in the galley to require only heat detectors that comply with UL 521. We have not specified a specific performance standard for the required heat detectors; however, we agree with the commenter that only restorable heat sensing type detectors may be used (i.e., detectors that automatically reset to operating condition when the heat source is removed), and have

changed the requirements in redesignated § 142.330(c) accordingly.

In the NPRM we discussed comments submitted in response to seven questions we posed in a December 30, 2004, Inspection of Towing Vessels notice. In response to that portion of the NPRM, one of these commenters recommended applying grandfathering to structural fire-protection requirements. The commenter also felt that existing vessels should be treated differently from newly constructed vessels because of the likelihood that fire standards will make it difficult to retrofit existing vessels. We have made no changes to the final rule in response to this comment. The fire protection standards proposed in this part retain most of the fire protection regulations that currently apply to existing towing vessels and are contained in Title 46 CFR parts 25 and 27. Only three new requirements have been added. Section 142.227 requires all vessels to have a fire axe, § 142.330(b) (proposed § 142.335) requires smoke detectors in berthing areas, and § 142.226 (proposed § 142.345) requires firefighter's outfits on certain ocean-going vessels. Battery-operated smoke detectors will be permitted, and the addition of fire axes and firefighter's outfits does not require any modifications to the vessel; therefore, we do

not agree that either requirement would be difficult to implement onboard existing vessels.

M. Machinery and Electrical (Part 143)

In this final rule, we made substantive changes in response to specific comments on the NPRM, and we also made significant organizational changes. Because of the organizational changes, subpart headings and section numbers in this part no longer correspond to those used in the NPRM. Much of the content of proposed part 143 has been removed or reordered, and several provisions have been changed to apply to new vessels only. The requirements of proposed subpart C, deferred requirements for existing vessels, and proposed subpart D, for oil and hazardous material in bulk, have been divided among the other subparts. This derivation table lists part 143 section numbers in this final rule and the corresponding part 143 section from the NPRM:

Table 1: Derivation of sections of part 143 from the NPRM

Final Rule section number	NPRM section number(s)
143.100	143.110
143.105	143.105
143.115	143.115
143.200	143.200, 143.325, 143.330, 143.335
143.205	143.220
143.210	143.110, 143.215
143.215	143.210
143.220	143.235

143.225	143.240
143.230	143.245
143.235	143.250
143.240	143.330
143.245	143.260
143.250	143.270
143.255	143.275
143.260	143.280
143.265	143.285
143.270	143.290
143.275	143.295
143.300	143.320, 143.520, 143.525
143.400	143.300
143.410	143.310
143.415	143.315
143.450	143.210, 143.325, 143.515, 143.520
143.460	143.330
143.500	143.500, 143.505
143.505	143.505
143.510	143.510
143.515	143.515
143.520	143.520
143.540	143.535
143.545	143.540
143.550	143.545
143.555	143.340
143.560	143.345
143.565	143.350
143.570	143.355
143.575	143.360
143.580	143.550
143.585	143.405
143.590	143.410
143.595	143.420
143.600	143.430
143.605	143.435

In several provisions in the NPRM, we offered two different options for complying with design or operational standards in certain areas. These sections were divided up

into "functional requirements" and "prescriptive options" for complying with the functional requirements. The prescriptive options represented one way to comply with the functional requirements, but an owner or managing operator could choose another way to comply so long as the alternative method was approved by the OCMI or an approved third party. On further consideration, we have consolidated the functional requirements with other language about when and how exceptions from the baseline standard may be granted (see § 143.210).

#### Changes to Subpart A, "General"

The applicability of the subparts within this part has changed. The specific changes are discussed elsewhere in this preamble, but we have revised the discussion of applicability in subpart A to provide an overview of the entire part for readers. Most notably, subpart A now specifies that existing vessels (which includes those vessels already under construction that do not meet our definition of "new towing vessel"), have 2 years to comply with the rule; for certain listed provisions, the delay is longer. Additionally, because the structure of part 143 has changed, new vessels must comply with subparts B and C of part 143 except as noted in specific sections in subpart C instead of the proposed subpart E. Under our "new towing

vessel" definition, no vessel would be subject to new vessel requirements until at least July 20, 2017.

Because of the additional discussion of the applicability of each subpart and the changes to the discussion of functional requirements with prescriptive options for compliance, we removed proposed § 143.110. The content specific to OCMI or third-party acceptance of alternative methods is relocated to § 143.210 and consolidated. However, we will address here the comments received on proposed § 143.110. One commenter suggested adding the word "company" to the entities named in § 143.110(c) on alternatives to the prescriptive option. The Coast Guard declines to make this change, because an "owner or managing operator" may be a company. Another commenter suggested replacing OCMI or third-party acceptance with a TSMS accepted by the third party. This change would remove the option of OCMI acceptance and would not be appropriate for vessels not covered by a TSMS, so the Coast Guard declines to make the change.

As previously discussed in this preamble, we relocated the definition of "independent" to part 143 in response to a comment pointing out that the definition was specific to vessel arrangements described in this part.

Several commenters noted that that the phrase "replacement in kind" should not be construed too narrowly, so as to avoid subjecting existing towing vessels to unnecessary additional requirements. One commenter suggested that where a piece of equipment such as a generator is replaced with another that has the same function and similar characteristics but is not the exact same model, such replacement should be considered "replacement in kind." Another commenter suggested that proposed § 143.220 (now incorporated into § 143.205) would prevent vessels from upgrading to more efficient equipment.

We added a definition of "replacement in kind" to § 136.110 in response to numerous comments requesting clarification of this term, which is used in parts 143 and 144. When equipment needs to be replaced, it may be replaced by the same or similar equipment, or it may be upgraded. It is certainly acceptable to upgrade, but an upgrade is not considered a replacement in kind because the maintenance and operation of the new equipment may require operator training, new maintenance schedules, OCMI approval of equipment arrangement, and an update to the vessel's TSMS.

Finally, the Coast Guard removed the list of material incorporated by reference specifically for part 143

(proposed § 143.120) and moved that content to a consolidated list for the entire subchapter at § 136.112. The Coast Guard received one comment on the incorporation of standards by reference in part 143; the comment appeared to indicate that new incorporations are not necessary because there are existing, currently applicable standards elsewhere in title 46. The standards incorporated in part 143 are necessary because towing vessels represent a unique class of vessel design, and other standards incorporated in various CFR sections are not currently applicable to towing vessels. The engineering standards incorporated in subchapters F, J, and Q, for instance, are generally applicable to much larger ships with different risk profiles, such as passenger ships or large tank vessels.

#### Changes to Subpart B, "Requirements for All Towing Vessels"

The organization of subpart B remains largely the same as in the NPRM, although the section numbers have changed. We removed proposed § 143.230, "Guards for exposed hazards," as it was duplicative of proposed § 144.345. For more on this, see discussion of changes to part 144 below. We also added two sections from proposed subpart C - pilothouse alerter systems and towing machinery - which have delayed application dates for existing vessels. An existing vessel must comply not later than 5 years after



the issuance of the first COI for the vessel. This delayed compliance date is reflected in § 143.200(c) and is the same length of time as was proposed in the NPRM at proposed § 143.320. The details of these requirements, and other changes to proposed subpart C, are discussed later in this preamble.

#### General

We redesignated proposed § 143.220 as § 143.205. The Coast Guard received a suggestion that we insert the phrase "in accordance with their responsibilities" in proposed § 143.220(b). The Coast Guard agrees with the general approach and has revised the paragraph to clarify that crewmembers must demonstrate ability to operate the machinery and electrical systems for which they are responsible.

Another commenter suggested changing the requirements in proposed § 143.220(c)(3) to apply to all control stations (operating stations) instead of just the primary one. The Coast Guard agrees and has removed the word "primary" from this requirement. The Coast Guard understands that certain vessels have more than one operating station; in such cases, each operating station would need to comply with revised and redesignated § 143.205(c)(3).

One commenter suggested that the Coast Guard insert the phrase "with respect to the installation in question" in the sentence in proposed § 143.220(d) that requires installations to comply with subpart C for new vessels if the installation is made after this rule becomes effective and is not a replacement in kind on an existing towing vessel. The Coast Guard declines to make that change because the original language was unambiguous and the addition unnecessary.

Another commenter asked the Coast Guard to change proposed § 143.220 to "clarify that replacements mandated by regulation will not trigger the referenced follow-on regulations ...." The Coast Guard disagrees. If equipment requires replacement and the owner or managing operator chooses not to make a replacement in kind, it is considered an upgrade and subpart C may apply. Depending on the significance of the replacement (whole system versus one particular piece), newer standards may be applicable. Applying subpart C to replacement equipment will not result in the same cost as applying subpart C to existing equipment, and is appropriate because the maintenance and operation of the new equipment may differ.

Alternate design

We combined proposed § 143.215 on alternate design considerations with the functional requirements provisions of proposed § 143.110 that called for OCMI or third-party acceptance; these are now located in § 143.210, and have been further condensed to refer to similar provisions in §136.115. As noted earlier in this preamble, these changes do not alter the availability of approval for alternate designs.

The Coast Guard received several comments requesting that we add "company" after "owner" in proposed § 143.215. The Coast Guard partially agrees. In § 143.210(a), we inserted "or managing operator" after "owner" to be consistent with other sections where we list both. The definition of "managing operator" in § 136.110 includes organizations, and if a company owns the vessel, it would be covered by the definition of "owner."

#### TSMS

We removed proposed § 143.205, as it was duplicative of part 138. With respect to the content of that proposed section, one commenter had suggested the Coast Guard include "guidelines" in paragraph (a), along with policies and procedures to ensure compliance. The Coast Guard declines to make such a change in the provisions discussing TSMSs, because the purpose of the TSMS is to help ensure

compliance with all parts of this subchapter, and the inclusion of guidelines is not necessary to that minimum standard. Nothing prohibits the inclusion of guidelines in individual TSMSs, however.

#### Existing vessels built to class

We redesignated proposed § 143.210 as § 143.215. Proposed § 143.210 had provided that vessels classed by the American Bureau of Shipping (ABS), or built to ABS rules, would be considered in compliance with part 143 if they met certain additional requirements. However, we determined that the requirements for existing and new vessels need to be further distinguished.

This final rule creates flexibility for existing vessels: existing towing vessels currently classed by any recognized classification society, or determined compliant with any recognized classification society's appropriate rules, are equivalent to nearly all of the requirements of subpart B. We have reduced the list of additional requirements originally proposed in § 143.210(b), so that existing vessels that are classed or built to class rules only need to meet the pilothouse alerter requirement (by the delayed effective date, 5 years after the issuance of the first COI for the vessel) and readiness and testing requirements. These fundamental safety provisions replace

the longer list that we had proposed. In particular, proposed paragraph (b) (2) on potable water was removed because, as a number of commenters noted, proposed § 143.225 was "reserved" and listed no requirements. The Coast Guard agrees with the suggestion to remove this reference to potable water requirements; we note that Food and Drug Administration requirements in 21 CFR 1250.82 already apply to potable water systems for most towing vessels engaged in interstate commerce. In addition, in § 140.510(a) (14) an owner or managing operator must identify and mitigate health and safety hazards related to the towing vessel's potable water supply.

Also, with regard to proposed § 143.210(a), the Coast Guard received several comments suggesting we change the phrase "mechanical standards" to "machinery standards." The Coast Guard agrees that "machinery standards" is the industry accepted term, and amended the section accordingly. In what is now paragraph (b), the Coast Guard clarified that the OCMI or a third party would deem the vessel to be in compliance.

As is discussed later in this preamble, new towing vessels meeting ABS rules in accordance with § 143.515, or classed by ABS, are considered to be in compliance with part 143 except for the pilothouse alerter and readiness

and testing sections that are described below. New towing vessels classed by other recognized classification societies may also be compliant with part 143 if approved by the Coast Guard. This final rule offers more flexibility than the proposed rule, in that it provides for Coast Guard approval of other class standards, but does not automatically accept all classed vessels as compliant with part 143. In light of the wide range of possible class standards in the future, we believe this is the correct balance between safety and feasibility.

#### Machinery space fire prevention

We redesignated proposed § 143.235 as § 143.220. One commenter suggested the Coast Guard change "flammable liquid" to "flammable or combustible liquid" in proposed paragraphs (a) and (c), to cover diesel fuel. The Coast Guard agrees that most grades of diesel fuel are considered "combustible liquids" as opposed to more volatile "flammable liquids" such as gasoline, and amended the section accordingly to indicate the intent of preventing fires. We also refer to 46 CFR subpart 30.10 for definitions of those terms. Similarly, one commenter suggested we add "and other flammable liquids" to the restriction on oil in proposed paragraph (b). The Coast Guard agrees with the underlying concern, but has removed

proposed paragraph (b) because it was duplicative of the fire hazards provision in part 142.

With respect to proposed § 143.235(c), several commenters said that the temperature threshold required, 65.5 °C (150 °F), is too low to be practical. The Coast Guard agrees that the temperature specified in the NPRM was impractical, and amended what is now § 143.220(b) to adopt the SOLAS requirements for insulation of hot surfaces: 220 °C (428 °F) as was suggested by several commenters. SOLAS is an established, internationally recognized set of rules developed and ratified by maritime nations worldwide, and the Coast Guard determined that this was the most appropriate reference.

With respect to proposed § 143.235(d), one commenter suggested the Coast Guard change "materials" to "products." The Coast Guard agrees that the suggested change is necessary to achieve uniformity between parts 142 and 143, and amended § 143.220(c) accordingly. In the same section, one commenter suggested that the Coast Guard include the amounts of flammable and combustible materials that can be safely stored in machinery spaces under this section. The Coast Guard declines to do so because, under the original proposed language, the limits would be determined by the size of the designated areas defined in § 142.225 or the

size of the flammable storage cabinet that satisfies UL 1275. In addition, because available storage areas will be limited by prohibitions on ignition sources in those areas, we believe that operators will carry only the amounts of products necessary for the vessel mission.

The Coast Guard received several comments recommending adding the language from proposed § 144.360(c) to proposed § 143.235, because it pertains to machinery space fire prevention. The Coast Guard declines to add the language to part 143 because the provisions of § 144.605 address this topic for all towing vessels.

#### Control and monitoring requirements

We redesignated proposed § 143.240 as § 143.225. The Coast Guard received several comments requesting that we change "thrust" to "RPMs" in proposed paragraph (a).

The Coast Guard does not agree with these comments because the use of the word "thrust" is intended to cover other propulsion systems in use today, including varying propulsion and steering control designs, as well as indicators. An example would be a shaft tachometer as an acceptable means of monitoring the vessel's propulsion thrust.

The Coast Guard received several comments asking if the position of the rudder joystick is sufficient to meet



the requirements of proposed paragraph (b). The position of the rudder joystick does not provide a positive position of the rudder and is not acceptable. The rudder joystick simply provides an indication of the commanded position of the rudder.

#### Alarms and monitoring

We redesignated proposed § 143.245 as § 143.230. The Coast Guard received several comments suggesting that the panel in the wheelhouse needs only to alarm and should not be required to identify the piece of equipment that has tripped the alarm. The Coast Guard agrees that specifying the exact piece of equipment that is in an alarm condition is not necessary in the wheelhouse. Rather, a summary alarm in the wheelhouse is considered sufficient. We amended § 143.230 accordingly. The Coast Guard also received comments concerning the intent of requiring alarms to function when primary power is lost. We agree that it is impractical that alarms on existing vessels have a backup source of power in addition to the primary power supply, because the primary concern on a loss of main electrical power is restoring the main power source.

The Coast Guard received several comments requesting whether certain alarms should signal high or low levels; the Coast Guard agrees that clarification is needed, and

amended the section to specify which alarm settings are based on high or low conditions. Several commenters suggested that the requirement for a "main engine fuel oil pressure" alarm should be removed. One commenter indicated that requiring fuel oil pressure alarms was unnecessarily rigorous and would have a disproportionate effect on small businesses. We agree that a wide range of diesel engine fuel pressures may be acceptable depending on the manufacturer, and that fuel oil pressure is not normally considered a mandatory parameter to be monitored; these levels may be checked each watch. We therefore removed proposed § 143.245(a)(3) and (6) when drafting the final version of § 143.230.

One commenter requested a high level alarm requirement on day tanks, stating that a number of spills have occurred as the result of day tanks being overfilled. The Coast Guard agrees that a high level alarm could be beneficial. However, we do not have spill data to justify such a requirement and there are other acceptable means to ensure the day tank is not overfilled (for example, routing the overfill line to a storage tank, physically observing the level of the tank during filling operations, monitoring quantity of fuel transferred so it does not exceed available capacity). In the future, we may propose

requiring this alarm if spill data suggests overfilling of the day tank could have been avoided by such an alarm.

The Coast Guard also received several comments stating that proposed § 143.245(a)(9) (now designated § 143.230(a)(6)) addressing low fuel level alarms repeats proposed § 143.275(d) and that one of the two sections should be removed. The Coast Guard agrees, and removed proposed § 143.275(d).

One commenter suggested removing the requirement for hydraulic level alarms.

The Coast Guard disagrees. There is a need to monitor the hydraulic fluid in the steering hydraulic tank in the event of leaks or pipe/hose rupture, because it is essential for maneuvering.

With respect to proposed § 143.245(b)(3), the Coast Guard received several comments in favor of a self-monitoring alarm system.

The Coast Guard agrees that a self-monitoring alarm system is a practical alternative to manual testing of the alarm system, and amended § 143.230(b)(2) accordingly.

The Coast Guard received several comments suggesting deletion of the requirement at proposed § 143.245(c) that gauges be visible at the operating station. The Coast Guard agrees that gauges are not required at the operating

station, provided that there are alarms or a summary of alarms at each operating station. We amended this section for clarification.

One commenter suggested that several provisions of the NPRM, including gauges for engines at proposed § 143.245(c), should not be required because they are not required of passenger vessels in subchapter T.

The Coast Guard disagrees with the suggestion that that no gauges should be provided, although we agree that subchapter T vessels and subchapter M vessels could have similar systems. The gauges required by proposed § 143.245(c) are considered minimum requirements for monitoring engine performance. However, in the final rule, the number of gauges required has been reduced to only those considered essential to engine monitoring, and which normally are provided by the manufacturer with all engine installations regardless of the vessel type.

With respect to paragraphs (c)(1) and (3) one commenter suggested that the Coast Guard add the engine RPMs to these sections. The Coast Guard agrees that the main engine(s) and auxiliary generator engines should be equipped with RPM indicators, and amended the sections accordingly.

We deleted proposed paragraph (d) because summary alarms are already allowed under revised § 143.230(b)(1), so there is no need for a separate section allowing this on excepted vessels. With respect to proposed paragraph (d) one commenter suggested that the Coast Guard add "crewmembers responding to the alarm(s)." The Coast Guard agrees with the comment in that the proposed text could have been more specific regarding communications between crewmembers. However, proposed paragraph (d) was applicable only to excepted vessels, and given the traditional size and service of excepted vessels, we ultimately determined that a separate paragraph was not necessary.

#### General alarms

We redesignated proposed § 143.250 as § 143.235. One commenter suggested that the Coast Guard clarify the applicability of this section. That commenter also recommended requiring the public address system on towing vessels be equipped with "talk-back" capability.

The Coast Guard has modified the applicability section to be clearer, and has made similar clarifying changes to § 143.240(a). As for adding a requirement for "talk-back" capability, we disagree. This capability is not required

on any commercial vessel and would be unnecessary for the usual purposes of a public address system.

#### Readiness and testing

We redesignated proposed § 143.260 as § 143.245 and, as described earlier in this preamble, removed the functional and prescriptive designators in favor of a unified section on alternatives at the beginning of the part. One commenter suggested that the Coast Guard remove "(if available)" from proposed § 143.260(a).

The Coast Guard agrees that manufacturer's instructions are normally available, and removed the phrase "if available."

With respect to proposed § 143.260(b), the Coast Guard received several comments to amend parts of the table to clarify that the intent is for a crew change and not a watch or shift change. The Coast Guard agrees that testing the propulsion and steering controls is not necessary with every shift change, and amended the section to clarify that the test is only necessary prior to getting underway, but not more often than once every 24 hours. In the same section, one commenter suggested changing the required testing frequency of alarm setpoints and pressure safety valves from annually to every 2 years or longer.

The Coast Guard agrees and has amended Table 143.245(b) to make these requirements more consistent with similar requirements in subchapter F. Finally, one commenter suggested the Coast Guard change "pressure vessel safety valves" to "pressure vessel relief valves." The Coast Guard agrees that relief valve is the more common terminology and amended the section accordingly.

#### System isolation and markings

We have redesignated proposed § 143.270 as § 143.250. The Coast Guard received a number of comments suggesting that "graywater lines need not be fitted with isolation valves or marked if all piping is contained inside a fuel tank or void." The Coast Guard disagrees. It is not possible for "all piping" to be contained in a tank, and it is important for the piping system to be identified. However, the intent of the requirement is for crew members to be able to identify piping systems used in normal, everyday operations, and therefore it is not essential that systems in normally inaccessible spaces be identified.

One commenter suggested that the Coast Guard add a new paragraph (e) to proposed § 143.270 to cover sanitary discharges, and add "Except as provided in paragraph (e) of this section" to the beginning of this section. The Coast Guard declines to do so because the requirements in this

section would apply to any system piping penetrating the hull beneath the waterline. However, variations could be accommodated through the provision for alternate design approvals that has already been discussed in this preamble.

With regard to proposed § 143.270(e), one commenter stated that the use of "either" ISO Standard 14276 or marking in accordance with the TSMS applicable to the vessel would lead to a lack of uniformity between towing vessels and is counterproductive. The Coast Guard agrees that one standard for industry color-coding of piping is preferred, but lacks the casualty data to support a mandate for one particular standard. Another commenter suggested that the Coast Guard identify the basic colors used to mark piping.

The Coast Guard declines to do so because the international standard referenced in this section already identifies basic piping colors.

#### Fuel system requirements

We redesignated proposed § 143.275 as § 143.255. The Coast Guard received several comments suggesting that the requirement at proposed § 143.275(c) to replace fuel filters be based more on "performance requirements" as opposed to manufacturer recommendations. The Coast Guard partially agrees and amended the section, but considers



manufacturer recommendations to be based already in part on performance requirements, such as differential pressure and time in service. We also amended proposed § 143.275(a) to clarify that the term “be maintained” used in the proposed rule means a documented maintenance plan. We also made nonsubstantive changes to proposed § 143.275(b) for brevity and clarity.

As previously discussed, we removed proposed § 143.275(d) in response to comments stating it was duplicative of proposed § 143.240(a)(9). We then added a new paragraph (d) that requires the use of diesel fuel unless approval for another fuel is obtained pursuant to § 143.210 or § 143.520. We did this because diesel fuel is considered the standard for marine fuels, and the use of more volatile fuels such as liquefied natural gas or propane requires approval by the MSC.

#### Fuel shutoff requirements

We redesignated proposed § 143.280 as § 143.260. The Coast Guard received a comment suggesting that we define “near the source of supply” as used in proposed § 143.280(c). The Coast Guard agrees with this commenter. To clarify the section, we drafted § 143.260(c) to require that the valve be installed in the fuel piping directly outside of the fuel oil supply tank. We also received a

comment suggesting that the use of extra heavy piping should be explicitly allowed as an alternative to situating the valve near the source.

The Coast Guard disagrees. While such arrangements may be acceptable with proper piping materials or other design choices, locating the valve directly after the fuel supply source is the most effective way to stop a leak.

The Coast Guard received one comment suggesting that we remove the words "outside the space where the valve is installed" from proposed § 143.280(d) and instead specifically require that the valve be located on the weather deck.

The Coast Guard disagrees because a safe place outside the machinery may not always be located on the weather deck.

The Coast Guard also received one comment stating, in part, that the "requirement for remote shutdown of each engine outside the machinery space is unworkable" and suggesting the requirement should be removed.

The Coast Guard does not agree: the remote shutdown outside the machinery space is necessary in the event that the engine space is not accessible due to fire.

Additional fuel system requirements for towing vessels  
built after January 18, 2000

We redesignated proposed § 143.285 as § 143.265. With respect to proposed § 143.285(b), the Coast Guard received several comments requesting clarification on the proposed regulations regarding "portable bilge pumps." A "portable bilge pump" as specified in paragraph (b) is a dewatering pump. We received a comment suggesting that the proposed rule would limit an operator's ability to dewater a damaged tow. We disagree. The regulation allows for proper stowage and use of portable tanks or cans for portable bilge pumps. The rules for the barge itself are beyond the scope of this rulemaking, but "portability" of fuel is allowed in the circumstances specified by this section. If an operator is safely able to reach a towed unit, there is no prohibition on using portable equipment to dewater or fight a fire on that unit.

The Coast Guard received a comment suggesting that the proposed regulations did not consider a "closed loop" ventilation system option for venting. The Coast Guard does not agree with this characterization of the proposed rule, because proposed § 142.285(c)(1), now designated § 143.265(c), allows tank vents to be combined, as long as there is ultimately a vent to the outside. We received a comment suggesting revisions to the required size of the

vent piping. We partially agree, and the paragraph (c) has been amended for clarity on this issue.

One commenter expressed concern with the use of flexible fuel lines, noting that the use of flexible hose in the industry was "rampant," and also suggested requiring containment systems beneath oil purification equipment. This rule allows for flexible hose that meets certain incorporated standards, meaning the hose has passed pressure and fire testing. The rule also addresses the containment concern by requiring that gaskets and seals be maintained, and bilges kept free of accumulated oil.

#### Bilge pumps or other dewatering capability

We redesignated proposed § 143.295 as § 143.275. The Coast Guard received several comments suggesting "prescriptive" regulations, such as those for larger ships in 46 CFR 56.50, be applied to proposed § 143.295. The Coast Guard decided not to impose a prescriptive requirement for bilge pumping systems in this regulation because of the extremely large number of different configurations possible for towing vessels. A commenter said that proposed § 143.295 was not specific enough with regard to dewatering capability, noting that potentially ineffective dewatering methods such as "buckets" could be acceptable under the proposed text. We agree and have

amended the section to emphasize that an installed or portable bilge pump must be available.

One commenter suggested that only "installed" (not portable) bilge piping should be required to have a check/foot valve to prevent unintended flooding. The Coast Guard agrees because a permanently installed, power-operated bilge pump is not the equivalent of a portable pump. We amended the text accordingly, as the use of a portable pump implies constant operator monitoring, which would normally prevent improper flow (backflooding).

#### Pressure vessels on existing vessels

With respect to proposed § 143.300, the Coast Guard received several comments suggesting the application of existing pressure vessel requirements in 46 CFR subchapter F and the ASME Code. Although these are certainly acceptable for pressure vessel installations on all vessels, the Coast Guard does not have casualty data to support the mandatory use of the rigorous requirements of subchapter F by existing towing vessels. Similarly, one commenter suggested the incorporation of the ASME Code Section IV for heating boilers. The Coast Guard agrees that the ASME Code is a preferable design standard for heating boilers, and considers it acceptable for power or heating boilers on any vessel. However, the Coast Guard

has no significant reportable casualty data with a root cause of boiler or pressure vessel design that justifies the increased cost of requiring all towing vessels to use the ASME Code for towing vessel boilers.

The Coast Guard received several comments suggesting that proposed § 143.300(b) be clarified with regard to examination requirements. The Coast Guard agrees and amended paragraph (b) so that pressure vessels are externally examined annually, along with relief valve testing twice every 5 years. These changes make inspection requirements for pressure vessels and relief valves more consistent with the inspection requirements in subchapter F for pressure vessels on larger ships. Because of these changes we added a new paragraph (c) to require the maximum allowable working pressure be indicated on all pressure vessels.

The Coast Guard received a question concerning the pressure vessel requirements of proposed §§ 143.300 and 143.540: "Could a towing vessel also meet the requirements of 46 CFR 61.10 in lieu of the ABS Rules as prescribed in 143.540?" The Coast Guard agrees that compliance with 46 CFR 61.10 is acceptable and equivalent to (or exceeds) the requirements in this rule. However, § 61.10 generally is applicable to large ships and the Coast Guard does not

require towing vessels to meet subchapter F engineering requirements.

#### Electrical systems

We redesignated proposed § 143.305 as § 143.400. The Coast Guard received several comments suggesting the Coast Guard remove the requirement at proposed § 143.305(d) that switchboards and distribution panels be labeled with a description of the loads they serve. The Coast Guard partially disagrees. For proper circuit identification during operations and maintenance, labels must be provided for the equipment served. However, the Coast Guard has removed the requirement that equipment be marked with the location of the isolating switch or circuit breaker, because the panel should indicate that information.

The Coast Guard received several comments on proposed § 143.305(i) expressing confusion on the use of male receptacle outlets when transmitting power between two receptacles. The requested changes were in line with the Coast Guard's original intent, but we decided the clearest revision would be to remove the provision about male outlets. As long as the plugs, cables, and receptacles are compatible and designed for the power to be transmitted, specifying a particular configuration is not necessary.

#### Shipboard lighting

We redesignated proposed § 143.310 as § 143.410. One commenter argued that the requirement for emergency lighting in proposed § 143.310 would be prohibitively expensive for small businesses and is neither necessary nor of any value on smaller towing vessels where the crew typically knows the vessel intimately.

The Coast Guard disagrees. With respect to the cost, there are three different options for compliance, some as inexpensive as phosphorescent lighting strips. With respect to the utility this requirement in § 143.410 for internal crew working and living areas, we consider this lighting essential - even on smaller vessels - to facilitate egress in emergency situations when normal lighting is not working and dense smoke may be present.

The Coast Guard received several comments asking whether berthing spaces were required to have emergency lighting under proposed § 143.310(a). Specific berthing spaces are not required to have emergency lights. However, in the event of power loss there must be sufficient illumination in living areas to enable personnel egress from the living space. One commenter suggested adding a requirement for one flashlight per bunk. The suggestion is a good practice for mariners but the Coast Guard declines to make it mandatory.



With respect to proposed § 143.310(b)(2), the Coast Guard received several comments suggesting we lower the required automatic battery-operated emergency lighting capability from 3 hours to 30 minutes. The Coast Guard partially agrees with these comments, and has modified the requirement in § 143.410(b)(1) to 2 hours, consistent with subchapter T. The requirement of 2 hours will ensure the availability of battery-powered lights when needed, along with ample battery capacity. Emergencies that require egress from a space, such as a living space, do not necessarily mean abandoning the vessel: the crew may need to assemble on deck to fight a fire or flooding, or restart the main electrical plant. We confirmed that, for the second option, phosphorescent strips are available that provide illumination for more than 2 hours.

In addition, the Coast Guard removed proposed § 143.310(b)(1) because it was redundant with a related subparagraph in proposed § 143.340(b)(9).

#### Pilothouse alerter system

The pilothouse alerter requirements are now located in § 143.450. In the NPRM, we proposed a pilothouse alerter system requirement for all vessels (see proposed § 143.210, as well as §§ 143.325, 143.515, and 143.520), with a deferred compliance date for existing vessels. We proposed

this requirement in response to the NTSB report on the Robert Y Love allision with the I-40 Bridge, as well as eight incidents where the operator died while navigating the vessel and other cases that indicated probable incapacitation of the operator. The Coast Guard received comments supporting and opposing the inclusion of the deferred requirements proposed in § 143.325.

After considering public comments, as well as the traditional service and limited manning of towing vessels 65 feet or less in length, we determined that a pilothouse alerter system is not necessary for towing vessels 65 feet or less and have eliminated the alerter requirement for this category of vessels. This is accomplished in § 143.450(e).

We received a comment suggesting the alerter could become a distraction for harbor assist vessels. We disagree, because a compliant system could be set up to reset, for instance, each time the throttle or steering was changed. We also received comments that the alerter should not be required when a vessel had overnight accommodations but those accommodations were not in use. We decline to make a regulatory exception for this scenario, but this subchapter allows the OCMI the discretion to waive certain requirements on a case-by-case basis when appropriate.

We received a comment suggesting that requirements for systems such as pilothouse alerters should be performance-based, and flexible with regard to rapid developments in technology. The Coast Guard agrees. We have not specified a particular design for an alerter system, only that such system must meet certain performance requirements with regard to time limits and adjustability of the alarm time to suit the vessel mission.

With respect to proposed § 143.325(a)(3), imposing a 10-minute maximum acknowledgment time for the alerter, the Coast Guard received several comments suggesting that the acknowledgment time for the pilothouse alerted should be less than 10 minutes. The Coast Guard partially agrees. New paragraph (b) of § 143.450 provides that the time may be reduced by the owner or managing operator in the TSMS but must not be in excess of 10 minutes. We received a comment suggesting that the Robert Y Love incident would not have been prevented by an alerter set at 10 minutes. We acknowledge that it is possible that an alerter set at 10 minutes may not have prevented the incident. It is also possible that an operator could become incapacitated at any time within a 10-minute alerter reset period. In the Robert Y Love incident, had the pilot become incapacitated 1 minute before the alarm was scheduled to sound, it is

possible another crew member could have made it to the pilothouse and averted the collision. As a reference point, we note that SOLAS requirements for larger vessels (MSC.128(75)) require a bridge watchstander alarm with an elapsed time between resets of 3-12 minutes.

We received a comment stating that "fans with paper streamers effectively fool motion detector systems." The Coast Guard notes that a motion detector-type system is but one of many options to comply with the alerter requirement. An attempt to interfere with any system installed to meet the requirements of § 143.450 would be investigated. And as stated in § 140.1000, there are statutory penalties for violating the provisions of this subchapter.

The Coast Guard received several comments suggesting that a second, adequately rested crewmember should be required in the pilothouse at all times, as well as comments suggesting a second crewmember is an unnecessary expense. The Coast Guard partially agrees with both comments. A second adequately rested crewmember in the pilothouse of a towing vessel, while not required by this section, is an acceptable alternative to the pilothouse alerter system as stated in § 143.450(d). We chose not to require that a second crewmember be in the pilothouse because, in light of the thousands of vessels of all sizes

that safely operate with a single crew member on the bridge or operating station, depending on maneuvering circumstances, we could not justify the significant cost of requiring an additional watchstander on all towing vessels. However, under 46 U.S.C. 8104 and 46 CFR 15.705, it remains the master's responsibility to provide an adequate watch.

The Coast Guard received a comment requesting clarification of the pilothouse alerter requirements for vessels with more than one operating station. Because the alerter is required to detect incapacitation of the vessel pilot, the system must be arranged to alarm at each operating station. There may be various system configurations that meet the intent of this requirement.

#### Towing machinery

The towing machinery requirements are now located at § 143.460 and apply to all vessels, with a deferred compliance date for existing vessels. In connection with proposed § 143.330(b) the Coast Guard received several comments requesting an example of an acceptable safeguard against the towing machinery becoming disabled if the tow gets out of line. The Coast Guard agrees, and added an example of a common safeguard to this section. We also received a comment suggesting that the "winch slippage alarm" sound in the pilothouse. The Coast Guard agrees

such an alarm would be beneficial to operations, but we do not have the casualty data to support the mandate of such a system.

Deferred requirements for existing vessels (proposed subpart C)

As discussed earlier in this preamble, we removed proposed subpart C. We relocated to subpart B the requirements for pilothouse alerter systems and towing machinery, and retained the deferred compliance date for existing vessels: these requirements are discussed earlier in this preamble. We removed proposed § 143.335 on remote shutdowns because a similar effect is accomplished through proposed § 143.280 (now § 143.260) on fuel oil shutoff, and because remote fuel shutoff is already required by 46 CFR subchapter C.

The remaining deferred provisions of proposed subpart C - §§ 143.340 through 143.360 on specific electrical arrangements for existing towing vessels - have been moved to subpart C for new vessels. They do not apply to existing vessels. We made this change in response to comments indicating these provisions were not appropriate for existing vessels. Specifically, the Coast Guard received many comments recommending the deletion of the prescriptive requirements in proposed §§ 143.340 through

143.360. Commenters characterized the proposed requirements as burdensome, costly, requiring extensive modifications, and not justified by risk.

The Coast Guard does not agree that the proposed requirements were unjustified. Part 143 was developed in response to the recommendations in Sections 6.1 and 6.2 of the ABSG Consulting report, which were based on the risk analysis results in Section 4.3 of the report. See Uninspected Towing Vessel Industry Analysis Project Final Report, issued August 2006 and prepared by ABSG Consulting Inc., and Section III.C of the NPRM (76 FR 49978). An industry analysis project team performed a detailed analysis of the towing industry data from a number of data sources, such as MISLE and site visits. The team also used industry data provided by AWO as part of the Coast Guard-AWO Safety Partnership. Two previous examinations of towing vessel accident studies were also considered: the TSAC Towing Vessel Inspection Working Group report (TSAC 2005) and a report by the Coast Guard Allision Working Group (BAWG 2003). These risk analyses support characterizing the proposed requirements as risk-based.

However, several comments asserted that the functional requirements in proposed subpart B, "Requirements for All Towing Vessels," are sufficient for all existing towing

vessels. These commenters recommended the removal of proposed subpart C, "Deferred Requirements for Existing Towing Vessels." Further, the Coast Guard believes that many existing towing vessels were originally built to acceptable national or marine standards. Those would already be in substantial compliance with many of the requirements of subpart B of part 143 of the final rule.

The machinery and electrical requirements in subpart B will provide the owners or managing operators of existing towing vessels with the standards that existing equipment and installations must meet or should have met during the construction of towing vessels. Third-party inspections and eventual certification of electrical and machinery systems of existing towing vessels that are in marginal condition or poorly maintained may require some upgrades but may not necessarily need extensive modifications of the vessel's systems. Commenters provided estimates of the cost of extensive retrofits to existing vessels in the range of \$75,000 to \$300,000 per vessel, considerably higher than the cost estimated in the NPRM Regulatory Analysis (\$5,000 to \$20,000 per individual requirement). Further, comments indicated that the need for retrofits to comply with the regulatory requirements in proposed §§ 143.340 - 143.360 would impact more than the generally less than 5 percent of



vessels per requirement estimated in the NPRM Regulatory Analysis. The net result in total costs could exceed \$300 million (10-year, undiscounted). For these reasons, the requirements in proposed §§ 143.340 - 143.360 that were proposed to apply to all towing vessels will now apply only to newly built towing vessels, which includes vessels undergoing a major conversion. Comments pertaining to the substance of those standards are discussed later in this preamble.

Requirements for oil or hazardous material in bulk  
(proposed subpart D)

The proposed rule included deferred requirements for vessels that tow oil or hazardous material in bulk. In response to comments indicating these provisions were not appropriate for existing vessels, we removed these requirements from existing vessels and relocated the provisions to subpart C on new towing vessels. Comments pertaining to the substance of those standards are discussed later in this preamble.

Subpart C, "Requirements for New Towing Vessels"

Because of the organizational changes discussed earlier in this preamble, proposed subpart E for new towing vessels is now designated subpart C. We revised the applicability section in line with the organizational

changes described in our discussion of subpart A, and made nonsubstantive editorial changes. We also removed proposed § 143.505, as its content is now covered by the applicability section at § 143.500. In § 143.510, we replaced the phrase "plan approval" with the more accurate language "verification of compliance with design standards." We removed § 143.530 as unnecessary in light of other revisions to the part.

The "classification option" has changed little between the NPRM and the final rule. For a new towing vessel, the same three options apply in the final rule as in the proposed rule: new vessels may be built to recognized classification society standards (§ 143.515); to ABYC standards (§ 143.520) for smaller towing vessels; or to neither standard, but instead be subject to the requirements set out in subparts B and C of part 143. As an alternative to complying with the electrical system requirements that are now listed in subpart C, the vessel may instead comply with certain ABS rules as set out in § 143.580; this alternative is substantively the same as was proposed in the NPRM.

As was the case in proposed § 143.515, even vessels built to ABS rules or classed by ABS must comply with specific provisions of part 143. In this final rule, those

provisions are the requirements for vessels that move tank barges carrying oil or hazardous material in bulk (§§ 143.585 through 143.595), the readiness and testing requirements of § 143.245, and the pilothouse alerting requirements of § 143.450. The readiness and testing requirements of § 143.245 help verify proper in-service operation and safety of main and emergency systems, above and beyond the initial design requirements of part 143. As discussed above, the proposed potable water requirements have been removed, but they remain a health and safety requirement under § 140.510(a)(14). Also, in this final rule we created flexibility by providing for approval of towing vessels built to recognized classification society rules other than ABS's.

Section 143.520(a) remains substantially as proposed, but paragraph (b) has been revised to remove several requirements. New towing vessels of 65 feet or less in length that are built to the ABYC standards listed in paragraph (a) need only comply with the readiness and testing requirements of § 143.245, and with the requirements for vessels that move tank barges carrying oil or hazardous material in bulk (§§ 143.585 through 143.595) if applicable. Other requirements have been removed for

these vessels, including the pilothouse alerter requirements.

#### Pressure vessels on new vessels

We redesignated § 143.540 as § 143.545. With respect to proposed § 143.540(b), the Coast Guard received several comments requesting alternate standards to the ABS rule referenced for pressure vessels. While the ABS rules referenced are an industry standard for pressure vessels, the Coast Guard may determine other design standards, such as the ASME Boiler and Pressure Vessel Code, to be equivalent as described in § 143.210. Therefore, we made no changes to this paragraph in response to this comment.

#### Electrical engineering systems

Several comments also recommended the proposed prescriptive requirements in proposed §§ 143.340 - 143.360 should not apply to new towing vessels. The Coast Guard does not agree. The proposed requirements of these sections are based on the present acceptable national or marine electrical engineering standards. As explained in Section IV of the preamble to the proposed rule, the Coast Guard developed part 143 after considering the reports provided by ABSG Consulting and TSAC, which were generated from marine casualty cases and risks. Also, as stated in the preamble to the proposed rule, the Coast Guard

conducted its own in-depth analysis of the cases reviewed for the ABSG report, along with deficiency reports from examinations of towing vessels during compliance exams conducted pursuant to 33 CFR part 104 as part of the implementation of the Maritime Transportation Security Act of 2002 (MTSA) (46 U.S.C. Chapter 701). These reports provided evidence that substandard machinery installation and maintenance is a concern on towing vessels. For example, from January 2006 through August 2008, the Coast Guard conducted 768 of these MTSA compliance examinations of towing vessels and issued 2,949 deficiencies. Electrical deficiencies involving installation and maintenance accounted for 8 percent (226) of the deficiencies. This 8 percent deficiency rate highlights the need to establish more specific standards for electrical installations on towing vessels. The current regulations in subchapter C for electrical installations on uninspected vessels are minimal and not adequate for towing vessels. In addition, the incremental cost to incorporate the new standards into the design and construction of a new vessel are low in comparison of the total construction costs of the vessel and the potential reduction in risk of fire.

Several commenters provided cost estimates to retrofit an existing vessel to comply with the proposed requirements in §§ 143.340 - 143.360 that range from \$75,000 to \$300,000. These estimates are higher than the cost estimated by Coast Guard in the NPRM Regulatory Analysis (which ranged from \$5,000 to \$20,000 per requirement (\$60,000 per vessel if all of the requirements are incurred). The comments also indicated that far more vessels would require the retrofits than was estimated in the NPRM Regulatory Analysis. The NPRM estimated annualized costs of part 143 at \$3.2 million and the benefits at \$5.7 million. If the high end of the costs per vessel of \$300,000 were used, the annualized costs could as much as triple. Increasing the affected population for the retrofits as per the comment would increase the costs even more. Given the new information on the potential range of costs and affected population, the Coast Guard has determined that the benefits of the NPRM's proposed deferred requirements for existing vessels will not outweigh the costs. Given the potential cost burden of retrofitting existing vessels, the baseline electrical requirements for existing towing vessels in the final rule, coupled with a robust inspection regime, will establish an adequate safety environment for towing vessels.

The electrical requirements in this final rule will provide the owners or managing operators the design and engineering standards for equipment and installations for new construction. The prescribed electrical power and distribution system designs are based on proven electrical recommendations, practices, and consensus-based standards. Electrical power sources, generators, and motors

We redesignated proposed § 143.340 as § 143.555, and made nonsubstantive changes to simplify and shorten the section. The Coast Guard received several comments suggesting that proposed § 143.340 be clarified so that a backup generator could be used as a secondary power source. The Coast Guard agrees, and amended the text in paragraph (a)(3) to better explain the requirements for backup power source.

We also received a comment suggesting the proposed § 143.340 may be interpreted as requiring duplicate essential systems such as radar or emergency lighting. We did not intend the original language to be read that way, and have amended the corresponding section of the final rule to clarify that emergency communications and navigation equipment must be provided with a backup power source.

We received a comment stating that the electrical load analysis requirements of proposed § 143.340 were "excessive

and unnecessary". Although the Coast Guard believes that a load analysis is required for nearly all vessels with generators, we presume that load analysis has already been done for existing vessels and is therefore applicable only to new towing vessels. This change is reflected in this final rule. We also simplified the analysis requirement by removing proposed paragraph (b) (2).

The Coast Guard received several comments suggesting we include the specific NEC reference in article 430 in this section. The Coast Guard agrees and amended the section by specifying that Parts I through VII of article 430 are required. These Parts of Article 430 further define the scope of motor overcurrent protections required. We also received comments suggesting that the proposed requirements in § 143.340 will require "complete rewiring" of inland towing vessels. This comment is addressed by our decision to apply these requirements only to new vessels.

The Coast Guard received several comments suggesting we lower the ambient temperature rating at paragraph (b) (7) of this section from 50 °C to 40 °C, similar to ABS rules. The Coast Guard partially agrees. The Coast Guard amended the section so that the generator does not need to be certified to operate in an ambient temperature of 50 °C if it can be shown that the space the generator is in does not



exceed 40 °C. This reduction in minimum ambient temperature rating reflects an established normal ambient temperature allowance, even for large vessels currently regulated by the Coast Guard.

With respect to proposed § 143.340(b)(9) (now designated § 143.555(b)(8)) the Coast Guard received several comments suggesting clarification on what the Coast Guard meant by "two independent sources of electricity" in this section. To clarify, the prescriptive requirement in what is now paragraph (b)(8) requires a minimum of two sources of power. For example, if a generator provides the normal source of power for navigation lights, there must be another generator or a battery bank arranged as a secondary power source. One commenter suggested adding the word "essential" to paragraph (b)(8) this section. The Coast Guard agrees, and has modified the text accordingly. We have also amended the section to specify the radios and navigation equipment required in §§ 140.715 and 140.725. This change is in line with other comments suggesting that we include the distress alerting communications equipment listed in §§ 140.715 and 140.725. These comments also suggested that the backup power source for the distress alerting communication equipment have a means of monitoring the voltage available, and the source of supply selected

either by an automatic switchover or a simple switch in the vicinity of the emergency distress alerting communications equipment. The Coast Guard agrees that distress alerting equipment should be added to this section, and also that a means must be provided to monitor the battery condition, and amended the section accordingly.

We received a comment suggesting that, if a battery were to serve as the required secondary power source, it would need to be unnecessarily oversized for the loads specified. We mostly disagree; there is no requirement that the secondary power source be a battery (e.g., the secondary source could be a generator). The electrical loads specified in this section are not necessarily large consumers, and any battery sized for these loads needs to be sized proportionally, not oversized. Also, this requirement in proposed § 143.340 has been amended to apply only to new towing vessels.

However, we agree with the commenter that some alarms may not require a secondary power source, and have amended this section to be specific as to which alarms require secondary power.

We received comments suggesting removal of the requirement in proposed § 143.350 to separate overcurrent protection for essential and non-essential systems. We

disagree, because the intention is to prevent opening the circuit on essential loads because of a fault in a non-essential system. This requirement has been amended to apply only to new towing vessels.

We received a comment suggesting that "essential systems" be defined to avoid confusion in the inspection process. The Coast Guard agrees, and notes that a proposed definition of essential system was included in proposed § 136.110. However, we have amended the requirements of § 143.555 of the final rule to provide clarity on this issue.

#### Electrical grounding and ground detection

We redesignated § 143.355 as § 143.570. With regard to proposed § 143.355 the Coast Guard received several comments stating that most towing vessels are ungrounded, and that the section should specifically adopt the ground detection requirements of 46 CFR 183.378. Proposed § 143.355 did not prohibit the use of ungrounded systems. The Coast Guard recognizes that towing vessels can have either grounded or ungrounded electrical distribution systems. We agree with the comment, however, and therefore added detection requirements similar to 46 CFR 183.378. This requirement applies only to new towing vessels, and the requirements are based on vessels regulated under subchapter T, which have similar electrical systems. While

revising this section, we modified paragraph (e) to consolidate paragraphs (e)(1) and (3).

The Coast Guard also received several comments stating that this section does not allow the use of common two prong appliances less than 50 volts or two-prong double-insulated tools. The Coast Guard considers the use of two-prong double-insulated tools to be an acceptable industry practice, and amended the section to allow the use of double-insulated tools, or two-prong appliances of less than 50 volts.

#### Electrical conductors, connections, and equipment

We redesignated proposed § 143.360 as § 143.575. As discussed elsewhere in this preamble, we received comments stating that existing vessel compliance with this section and other electrical sections in the NPRM would involve substantial costs and retrofitting. The bulk of these comments are addressed by making these electrical requirements applicable only to new vessels.

With respect to proposed § 143.360, the Coast Guard received several comments suggesting we clarify paragraph (a)(2) with respect to overhead wiring. The Coast Guard agrees, and amended the section to specify that this requirement is applicable to overhead and vertical cable runs supported by cable hangers.

We received a comment suggesting the use of a performance standard rather than a specific cable hanging method. The Coast Guard partially agrees with the concern, but could not find an acceptable performance standard, so we have amended the section to allow a 48-inch spacing, rather than the proposed 24 inches, to be consistent with recognized electrical-contracting standards.

In paragraph (a)(3) of that section, one commenter suggested that wiring be allowed within 24 inches of moving machinery if the wiring is protected. The Coast Guard agrees, and amended this section to be applicable to cable and wire runs. We also clarified that cable and wire runs within 24 inches of moving machinery must be adequately protected to prevent damage, and added text to clarify what "moveable machinery" means.

In paragraph (b), one commenter suggested replacing the phrase "may not" with "must not"; the Coast Guard agrees that this language is clearer. This requirement is consistent with the permitted use of flexible cords or extension cords in Section 400.7 of the National Electrical Code (NEC), and Section 24.6.1 of IEEE 45-2002.

In paragraph (c), the Coast Guard received several comments stating that this section prohibits the use of power strips. The intent of this section is not to

prohibit the use of multi-outlet adapters (power strips), but to prevent "daisy-chaining" of power strips, which may overload the circuit. We have amended this section to clarify the requirement to prevent circuit overload when using power strips.

Towing vessels that tow oil or hazardous material in bulk

Because of the reorganization discussed earlier, a separate subpart for towing vessels that tow oil or hazardous material is no longer required. Proposed §§ 143.405 through 143.435 have been incorporated into the final rule's subpart C for new vessels. The requirements of proposed subpart D will not apply to existing towing vessels. This change responds to many comments arguing that proposed subpart D should not apply to existing vessels.

Commenters who opposed the application of proposed subpart D to existing vessels argued that the proposed requirements were not based on risk; would require unjustified or wholesale retrofitting; would cause severe economic penalty, disproportionate financial hardship for small towing companies, and might eliminate certain classes of towing vessels. Also, several comments asserted that the Coast Guard ignored the decline in the frequency and amount of oil spills from tank barges over the last twenty

years. Other comments mentioned that the proposed requirements in subpart D will have little impact on the prevention of oil spills in the tank barge sector because, as noted by TSAC, "Current industry best practices have produced a dramatic reduction in oil spills from tank barges over the last decade and a half, with a record low 919 gallons spilled (out of nearly 65 billion gallons transported) in 2010, the last year for which complete Coast Guard statistics are available." Also, industry comments mentioned that the preamble cites S. 1892, a bill introduced into the 110th Congress, as a reason for including the proposed subpart D in part 143, and note that this bill never became law.

We proposed subpart D based on the statistics from the ABSG report, which included high and low consequence incidents. Given the casualty history presented in the ABSG report, the Coast Guard determined that the proposed requirements could reduce the ongoing risk of oil spills and the resulting consequences. Data on oil spills through 2014 shows a continual pattern of a few major spills contributing to the majority of the volume spilled each year. Even though a recent TSAC report notes a dramatic reduction in oil spills from tank barges over the last decade and a half, the casualty data through 2014 indicates

that minimum safety standards for engineering system design, coupled with a robust inspection regime, would maintain or even further reduce the risk of spills.

Several commenters provided information on the cost to retrofit existing vessels to comply with the Subpart D requirements. The estimates range for all of the deferred requirements from \$75,000 to \$300,000 per vessel, higher than the Coast Guard estimates in the NPRM Regulatory Analysis. Existing vessels are already designed and constructed, so requiring a complete replacement of some vital engineering systems is neither practical nor justified by the safety benefit achieved.

In light of the new information on the costs for retrofitting existing vessels, the requirements of the proposed §§ 143.340 through 143.435 have been removed for existing vessels. The requirements are retained in the final rule for new towing vessels, as there is a smaller incremental cost to incorporate the design features in a new vessel.

Several commenters misinterpreted the proposed requirements in proposed §§ 143.405, 143.410, and 143.420 (now §§ 143.585, 143.590, and 143.595) regarding the installation of a second main engine. The intention of the proposed rule was to require redundancy of necessary



auxiliaries, allowing a sustained or restored propulsion capability of the towing vessel - not to require redundant engines. The proposed requirements did not prohibit a towing vessel with single propulsor, but only placed requirements for support equipment (auxiliaries) on vessels with one propulsor. The requirements differentiate between independent and/or redundant control systems and the propulsion systems under remote control. For example, on a vessel with two propulsion engines, the proposed rule requires the remote control of one engine to be independent of the remote control of the other engine. For risk reduction, the proposed requirements would ensure that when one engine remote control fails, remote control of the other engine would remain operable. We have also modified what is now § 143.595 for vessels with one propulsor, to clarify which equipment is considered a vital auxiliary, and eliminated the requirement that this equipment "automatically" assume the function of the failed unit. Although it is acceptable for vessels to have equipment that automatically starts when other equipment fails, it is not absolutely necessary, and in fact it may be preferred for crew members to visually assess a failure or impending failure of the primary equipment before deciding to manually start the redundant equipment.

In proposed § 143.405 (now § 143.585), one commenter suggested preventative maintenance schedules and additional required training in lieu of some of the requirements in this section. The Coast Guard disagrees. While an attentive operator may notice problems before the associated alarms and redundancy requirements are triggered, the alarms (with appropriate delays) are required as a means to alert the operator. We received a comment suggesting separation of the propulsion and steering requirements in this section. The Coast Guard acknowledges that propulsion and steering are two separate and vital systems, but the requirements for alternate arrangements and independence for these systems as specified apply to both propulsion and steering. Additional propulsion requirements are also specified in §§ 143.590 and 143.595.

We also received a comment suggesting the use of a "bow steering module," which is essentially an assist vessel attached to a barge propelled by a traditional towboat. Although the Coast Guard agrees that a bow steering module may be considered equivalent to the requirements of an alternate means of propulsion and/or steering, this type of arrangement would need to be

determined in particular cases by the OCMI or the Commandant for equivalency.

With respect to proposed § 143.405 (now § 143.585), one commenter asked whether paragraph (k) requires automatic starting of a standby generator or if the loads referenced should be on battery backup. The Coast Guard agrees that the proposed section was unclear and amended the section by specifying a second source of supply that is capable of automatically starting, and of helping to restore or maintain power to propulsion, steering and related controls when the main power source fails. This requirement will provide continued or restored operation of a towing vessel that moves tank barges carrying oil and hazardous material in bulk, even if the primary systems fail. One commenter was confused about what the Coast Guard meant by "stored energy" in paragraph (l). The Coast Guard clarified this section by providing examples of "stored energy systems" that are generally used onboard towing vessels. We also simplified this section by removing paragraph (l)(2) as not necessary for towing vessels.

With respect to proposed § 143.420 (now § 143.595), we added a clarifying description of "vital auxiliaries" in paragraph (a).

One commenter asked if proposed paragraph (d) (2) required two hydraulic tanks for steering. In response to the commenter, an acceptable arrangement would consist of two independent hydraulic tanks, or one hydraulic tank separated by a solid baffle, which is considered equivalent to two tanks. However, the Coast Guard has determined that the steering system requirements of § 143.550 are sufficient, that the requirements of § 143.595 are intended only for vital auxiliaries for propulsion, and so we have eliminated the steering system paragraphs from this section. Also, the fuel system requirements of proposed § 143.420(c) were redundant to current § 143.265, so we removed that paragraph.

We received a comment suggesting elimination of proposed redundancies in systems for vessels towing oil or hazardous material, and leaving those types of decisions for a case by case determination in the vessel's TSMS. We disagree, because it is important for vessels with one propulsor to have redundancies in the vital auxiliaries - such as fuel, lube oil, and cooling water - supporting the engine. However, this section has been amended to apply only to new towing vessels.

We received a comment suggesting "grandfathering" proposed deferred requirements because of prohibitive

costs, and have addressed this comment by applying these requirements to new vessels only. Another commenter requested clarification of "independent" as opposed to "redundant." Those terms have distinct meanings, but we agree that the proposed text could be clearer, and have amended §§ 143.115, 143.590, and 143.595 to define and use the term "independent." In this subpart, "independent" means the ability to perform a function regardless of the status of another system, and "redundant" is not used in subchapter M.

#### N. Construction and Arrangement (Part 144)

We received general comments suggesting the requirements proposed in part 144 were not justified by risk-based decisions and should therefore be removed. A commenter felt that some proposed regulations in this part are too stringent: for example, the commenter felt that the stability requirements in subparts A, B, and C of part 144 are not reflective of the loss history for inland vessels.

We disagree with the characterization of proposed part 144 as not risk-based and, further, we believe they represent the minimum safety standard of construction and arrangement that is common to all inspected vessels. While there are some requirements applicable only to new towing vessels, these requirements do not exceed the requirements

imposed on other types of small inspected vessels and, for this reason, we do not agree that they can be considered to be too stringent. As for existing towing vessels, we find no requirements in this rule that would require costly modifications to a properly maintained and satisfactorily functioning existing towing vessel.

Three commenters suggested that organizing vessels into two subparts, existing vessels and new vessels, instead of three subparts, would be easier for issues related to grandfathering. We generally agree that the proposed regulations would benefit from reorganization, and we have modified this part to delete requirements repeated in other parts of the subchapter or that were too vague. Further, we agree with the commenters with respect to organizing requirements into a format that is more aligned with other inspection subchapters.

A majority of the requirements are either the same or very similar to requirements contained in the Construction and Arrangement part in subchapter T, Small Passenger Vessels (46 CFR part 177). We aligned part 144 with the organization, and subpart and section titles, of part 177. This organizational choice also better reflects the relatively large number of part 144 requirements that apply to both existing and new vessels, and the relatively small

number that apply to new vessels only. As a result of these changes, we use the term "vessel" when discussing requirements that apply to both new and existing vessels, and use the specific terms "new" or "existing" vessel to describe those that apply only to one or the other. At the end of this discussion of comments on part 144 and structures and stability, we have provided a derivation table that lists part 144 section numbers in this final rule and the proposed sections from which they derived. Also, where appropriate, we have noted the corresponding part 177 section number or an explanation of an edit.

We received several comments, mainly from maritime companies suggesting revisions to § 144.215. Commenters suggested that special consideration be given to structural requirements for towing vessels "operating exclusively within [limited geographic areas], and towing vessels under 65 feet in length, in addition to towing vessels of an unusual design."

We agree with these commenters that the types of vessels for which special consideration may be given in proposed § 144.215 should be clarified, and we have adopted the suggested under-65-feet-in-length measure to define what we had described as "small vessels" in the proposed rule. This rule also provides that special consideration

may be given to vessels operating exclusively within a limited geographic area, because the OCMI is familiar with the specific hazards of the limited geographic areas within his or zone.

Commenters felt that proposed § 144.220(a) should be edited to ensure that routine upgrades to equipment, such as engine repowering, would not require compliance verification. Further, towing companies felt that proposed § 144.220(a) and (b) should be revised to clarify the intention of the terms "major conversion or alteration" and "replacements in kind."

The Coast Guard believes that compliance verification with design standards for upgrades to equipment, such as engine repowering, as in proposed § 144.220(a), should be retained because of possible changes to stability and other vessel characteristics related directly to safety. We have done so in this final rule in our redesignated verification of compliance section, § 144.135.

With respect to the request to clarify the terms "major conversion or alteration" and "replacement in kind" in proposed § 144.220(a) and (b), in § 136.110 we have clarified our proposed definition of "major conversion" and added a definition of "replacement in kind." We note that § 144.135 uses the phrase "major conversion or alteration":



although "alteration" is not defined in this rule, we use the term as it currently used in 46 CFR 91.55-10 to mean an alteration that involves the safety of the vessel. Separately, we have reformatted the text of § 144.135 in tabular form to make this section easier to read.

The term "verification of compliance" in part 144 addresses verifying that the design of a vessel meets the standards used. To distinguish this activity from the compliance verification required in part 137 under the TSMS option, we have added the words "with design standards" to this term. We also removed from this section the provision that a verification of compliance be performed upon request of the Coast Guard because this is covered by part 136.

To provide more options for the qualifications in proposed § 144.225, now re-designated § 144.140, we have extended the group of entities able to verify compliance with design standards to include the Coast Guard and certain authorized classification societies, not just ABS. For the purposes of this verification, the authorized classification society must have been delegated the authority to issue a SOLAS Cargo Ship Safety Construction Certificate and the employee who performs the verification must have the proper qualifications. Similar references to ABS with respect to a verification of compliance with

design standards have been revised accordingly. Regardless of the inspection option chosen, the verification of compliance with design standards can be performed by any one of the persons or entities identified in § 144.140.

Some commenters discussed the costs of developing plans for review. Two maritime companies suggested that proposed § 144.230, Procedures for verification of compliance with construction and arrangement standards, would be costly for companies with older vessels that were constructed without plans produced by a naval architect. A maritime company suggested alternatives for hull structure and piping, electrical, machinery systems and stability reviews that it viewed as more cost-effective.

Proposed § 144.230, now re-designated § 144.145, was intended for vessels undergoing a major conversion or alteration to the hull, machinery, or equipment - as described in proposed § 144.135. A major conversion often results in an extension of the vessel's service life. Therefore, the procedures in § 144.145, would not be invoked unless required by § 144.135. Because § 144.135 does not require a verification of compliance with design standards for an existing vessel, we do not envision that an owner or operator would need to provide plans to ensure the existing vessel complies with the standards used. A

new towing vessel will need to undergo a verification of compliance with design standards.

We have clarified procedures for verification of compliance with design standards to require copies of verified plans be provided to the third-party organization that conducts a survey, if applicable, in addition to the OCMI.

Two commenters suggested that because naval architects are well qualified, a P.E.'s signature is not needed for vessel construction. While many naval architects are also licensed P.E.s in the jurisdiction in which they reside or conduct their business, not all are. The benefits of P.E. licensure are well documented and accepted in the United States. The requirement for a P.E.'s seal on vessel construction plans may be considered commensurate with that required for buildings within a municipality. Accordingly, we clarified in § 144.145 that the documents must be stamped with the seal authorized for use by the individual performing the verification, whether that is the P.E. or a representative of the recognized classification society or the Coast Guard. We acknowledge that there may be gaps in documentation of smaller vessels, so we have clarified that the term "plan" means drawings, calculations, schematics,

diagrams or other documents and provide a list of what those plans may include, based mostly on 46 CFR 177.202.

We have clarified and revised the provisions for sister vessels in proposed § 144.235, now re-designated § 144.155, to be consistent with §§ 144.135, 144.140, and 144.145.

Two commenters said that the marking requirements in proposed § 144.240 should include the same basic colors used to mark piping for flammable liquid, seawater cooling, and firefighting systems proposed in § 143.270(c). We do not agree that piping marking requirements in part 143 need to be repeated in part 144. We made no changes from the proposed rule based on these comments.

Both proposed § 144.310(a) for existing vessels and proposed § 144.405 for new vessels specified that a vessel classed by ABS would meet the structural standards of part 144, because ABS rules include stability standards that generally meet those contained in Coast Guard regulations. We have consolidated those sections into § 144.120, stating that a vessel that is classed by a recognized classification society is in compliance with subparts B and C of part 144. In accordance with proposed § 136.210(c), as well as similar changes in this rule, we have acknowledged that structural and stability standards

contained in the rules of other recognized classification societies are commensurate with ABS rules, and have extended this provision to class by a recognized classification society.

In a similar way, we recognized that proposed § 136.210(d) deemed a vessel with a valid load line certificate to be in compliance with structural and stability standards, among others, and since proposed § 144.310(b) repeated this, § 144.125 contains this text.

In proposed §§ 144.305 and 144.310, we proposed structural standards for an existing vessel. These are now contained in § 144.200, which has been aligned with §§ 144.120 and 144.125 to avoid repetition. As provided in proposed § 144.305(a), an existing vessel to which no construction standard was applicable would need only show that it has been in satisfactory service and its service history does not cause the structure of the vessel to be questioned. Similarly, structural standards for new vessels that we proposed in § 144.410 are now contained in § 144.205. The use of alternate design standards is covered by § 136.115 as discussed elsewhere in this preamble.

Because the requirements of proposed §§ 142.220(c) and 144.350(a) were so similar, we have merged them into § 144.415.

A commenter said that proposed § 144.315 and § 144.415 regarding stability standards would not apply to all vessels and was concerned about grandfathering a number of vessels that may be unstable and remain uninspected. As discussed in more detail elsewhere in this preamble, this final rule focuses on the towing vessels presenting the greatest risk. Further, several commenters stated that stability is not a problem on inland towing vessels. The Coast Guard notes that casualty records generally support this view. For an existing vessel that will be inspected, the stability standards for an existing vessel in § 144.300 will require the vessel to show it has a history of satisfactory service that does not cause its stability to be questioned, or meet a similar standard that ensures adequate stability. Stability standards for a new vessel in § 144.305 will require the vessel to show it complies with minimum standards that are applied to other inspected vessels. One commenter suggested that a minimum freeboard of "like 24 inches" for all vessels would improve stability standards. While the Coast Guard agrees that a requirement for such a freeboard may improve stability, both the degree

of the stability improvement and its benefit are unknown and, for this reason, a freeboard requirement of this amount was not included in this final rule.

An association commented that that the proposed regulation (§ 144.355) does not contain size requirements and specifications for accommodation spaces for the crew. The commenter recommended several specifications to be included in the regulations.

The Coast Guard declines to adopt the suggested specifications. Our proposed requirements for accommodation spaces for the crew on towing vessels subject to inspection under this subchapter were contained in proposed § 144.355 and were generally taken from subchapter T - small passenger vessels. In response to comments, we have amended proposed part 144 to include a subpart dedicated to crew spaces. Crew space requirements in this final rule, as we proposed in the NPRM, are based on performance standards rather than prescriptive size requirements.

With respect to proposed storm rail requirements in proposed § 144.340, now re-designated § 144.810, we added the option of hand grabs but removed the requirement for storm rails on both sides of a passageway more than 6 feet wide because there are no towing vessels to which this

subchapter would apply that would have such a wide passageway.

An individual suggested the removal of proposed § 144.345, Guards in dangerous places, because of its similarity to proposed § 143.230. We decided to keep this requirement, now designated § 144.820, in part 144 and delete the similar requirement in part 143.

With respect to insulation of hot piping, we retain the requirement for existing vessels in proposed § 144.350(b), now redesignated § 144.830, and for new vessels we provide a similar but more specific requirement that aligns with an existing requirement in 46 CFR 177.970.

In reference to a collision event involving the tug *Caribbean Sea* and a "Duck" tour boat in Philadelphia in 2010, a commenter recommended that the NPRM include "height of eye" guidelines for towing vessels. The commenter also suggested that the Coast Guard consider including the "transmissivity of light" through glazing materials on towing vessels in proposed § 144.325 or § 144.425.

The Coast Guard notes that while "height of eye" requirements are not specifically addressed in this rule, the regulations in subpart I require windows and other openings at the operating station to be properly located to provide a clear field of vision. As proposed in both §§



144.325 and 144.425, the visibility of the windows immediately forward of the operating station in the pilothouse must allow for adequate visibility regardless of weather conditions. In response to the idea to include a "transmissivity of light" requirement, the Coast Guard notes that 46 CFR 177.1030(b) includes such a standard for operating station visibility for small passenger vessels and we decided to include this same requirement at what is now § 144.905(e).

Table 2: Derivation of sections of part 144 from the NPRM

Final Rule section number	NPRM section number(s)	Notes (if necessary)
144.100	144.100	Revised text referring to "plan review and approval" to "verification of compliance" for clarity.
144.105	144.200, 144.300, 144.305, 144.400	Created general applicability section, § 144.105, after removing definition section. Our revisions to part 144 eliminated subparts specifically for all vessels, existing vessels, and new vessels, so we combined applicability sections for those subparts into § 144.105. In paragraph (b) that refers to alterations or modifications, text similar to that contained in SOLAS Chapter II-1/1.3, "... insofar as is deemed reasonable and practicable" is added to reflect actual process that will be addressed in the verification of compliance with design standards.
	144.105 144.110	Removed § 144.105, Definitions; added definition of "length between perpendiculars or LBP" to § 136.110. Derived definition for LBP term, used in final rule §§ 144.155 and 144.315, from § 170.055. We moved the content of the former § 144.110 to a consolidated central incorporation by reference section for the entire subchapter, § 136.112.
144.120	144.310(a), 144.405, 136.210(c)	While proposed § 144.310(a) addressed only structural adequacy, proposed § 136.210(c) was broader and referred to compliance with the entire subchapter. This section reflects the general satisfaction of subparts B and C of part 144 by vessels currently classed by a recognized classification society.

144.125	144.310(b), 136.210(d)	While proposed § 144.310(b) addressed only structural adequacy, proposed § 136.210(d) was broader and referred to compliance with the structural, drydocking, and stability requirements of the subchapter. This section reflects the satisfaction of structural, stability, and watertight integrity requirements by a vessel holding a valid load line certificate.
144.130	136.115(b)	Vessel in compliance with SOLAS is considered to be in compliance with part 144.
144.135	144.220	Verification of compliance requirements are placed into a table for clarity.
144.140	144.225	Qualifications revised into a table for clarity.
144.145	144.230	Procedures for verification are clarified with minor revisions that include a clarification that "stamped" means the imprint of the seal of the P.E. and that "plans" include a list of drawings, diagrams, calculations, schematics and other similar documents.
144.155	144.235	Sister vessel verification clarified with general revisions. Among these is a change of "same plans" to "verified plans" and "equipped with same machinery as the first vessel" to "equipped with machinery of the same make and model as the original vessel."
144.160	144.240	General marking requirements clarified with general revisions including a more appropriate reference to draft mark required in subchapter I at 46 CFR 97.40-10.
	144.205	Proposed section on TSMS deleted because the proposed TSMS requirements are contained in parts 137 and 138.
	144.210	Proposed section with general requirements deleted because the general requirement is repeated from parts 136 and 137.
144.200	144.310	Structural standards for existing vessels are contained in this section.
144.205	144.410	Structural standards included for new vessels including

		rules and alternatives.
144.215	144.215	This section is revised to clarify conditions under which OCMIs may act on special consideration.
144.300	144.315	Retains proposed stability requirements for an existing vessel with a stability document and added satisfactory service, operational tests, or a satisfactory stability assessment as standards for an existing vessel without a stability document; weight and moment history moved to § 144.315.
144.305	144.415	Contains stability requirements for new vessels; lifting requirements moved to § 144.310; weight and moment history moved to § 144.315
144.310	144.415(d)	New section for lifting requirements.
144.315	144.315(c), 144.415(e)	Weight and moment history requirements consolidated into one section.
144.320	144.320(a)	Revised to refer to both new and existing vessels; section title changed to also refer to weathertight integrity.
144.330	144.320	Revised section to provide OCMI authority to require review of a vessel's watertight or weathertight integrity. Proposed paragraphs (a)(1), (2), and (3) are deleted as repetitions of requirements in §§ 140.610(a) and (f) and § 143.270, respectively.
144.400	144.435(a)	Fire protection requirements applied to a new vessel, except § 144.415 which applies to each new and existing vessel.
144.405	144.435(a)	Section title taken from § 177.405(a) with the requirements unchanged from the proposed rule.
144.410	144.435(b)	Section title taken from § 177.405(c) with the requirements unchanged from the proposed rule.
144.415	144.350(a), 144.435(c), 142.220(c)	Section title taken from § 177.405(b) with the requirements in three proposed sections merged.

	144.435(d)	The provisions in proposed § 144.435(d) are covered in § 142.225, Storage of flammable or combustible products.
144.425	144.435(e)	Section title taken from § 177.405(f) with the requirements unchanged from the proposed rule.
144.430	144.435(f)	Section title taken from § 177.405(g) with the requirements unchanged from the proposed rule.
144.500	144.330(a), 144.330(e)	Requirements similar to § 177.500(a)
144.505	144.330(b)	Requirements similar to § 177.500(b) and (c)
144.510	144.330(c)	Requirements similar to § 177.500(n)
144.515	144.330(d)	Requirements similar to § 177.500(o)
144.600	144.360(a)	
144.605	144.360(c)	
144.610	144.360(b)	
144.700	144.355(b), (c)	
144.710	144.355(a)	
144.720	144.355(d)	
144.800	144.335	
144.810	144.340	Added hand grabs as an option to storm rails and removed requirement for storm rails on both sides of a passageway more than 6 feet wide.
144.820	144.345, 143.230	Proposed requirements for guards for exposed hazards in part 143 is merged with part 144 proposed requirement.
144.830	144.350(b)	Hot piping insulation requirement for an existing vessel is retained and a more specific requirement for a new vessel is based on § 177.970.
144.905	144.325, 144.425	Proposed requirements for operating station visibility for both existing and new vessels are merged.
144.920	144.430	Changed "porthole" to "portlight" to match our intent for this requirement. In practice, this change is a nonsubstantive clarification because the requirement is only relevant to portholes with portlights.

#### O. Miscellaneous comments

In the NPRM we discussed comments submitted in response to seven questions we posed in a December 30, 2004, Inspection of Towing Vessels notice. Some commenters commented on those questions and that discussion. One person stated that uninspected towing vessels have been running efficiently for more than a century and that they have no problems that need to be addressed by a TSMS. In response to a discussion of grandfathering, another commenter stated that many existing towing vessels have operated in excess of 40 to 60 years without a major accident.

While towing vessels may be running efficiently, and many may not be involved in a major casualty, as we noted in the NPRM, towing vessel casualties continue to occur. Each year,<sup>6</sup> there is an average of 18 fatalities, 35 injuries, \$66 million in property damages, and 446,000 gallons of oil spilled. Additional damages occur after towing vessel casualties in the form of delays from lock and waterway closures. A primary objective of this rulemaking is to reduce fatalities, injuries, property

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<sup>6</sup> Casualty consequences are from MISLE for accidents from 2002-2007.

damaged, and oil spilled, by reducing the risk of towing vessel casualties.

Others who commented on our discussion of these questions from 2004 focused on specific subject areas intended to be addressed by our proposed regulatory text and the reasoning we provided in the preamble of the NPRM for that proposed text:

- Machinery and Electrical: A commenter noted that space constraints and crew abilities should be considered before requiring new equipment on small vessels.
- Applicability: Three commenters suggested that existing vessels should be "grandfathered" to minimize the expense and potential closing of businesses that will not be able to comply with new regulations. One commenter felt that few vessels other than those under 26 feet, or those used for commercial recreational vessel towing assistance, should be exempted from the regulation, and that fleeters should be exempted on a case-by-case basis.
- Construction & Arrangement, Fire Protection, and TSMS: One of those commenters would only apply grandfathering to equipment, hull construction and

structural fire-protection requirements, but recommended that all vessels should comply with the proposed SMS rules within one year.

- TSMS: The same commenter suggested that using the ISM Code from 2002 as a guideline in developing the SMS requirements will allow for a number of operators using the AWO RCP to be compliant.
- Fire Protection: The commenter also felt that existing vessels should be treated differently from newly constructed vessels because of the likelihood that fire standards will make it difficult to retrofit existing vessels.

While these comments are not in direct response to the regulatory text we proposed, we have addressed these comments in the same section of the preamble where we discuss comments on the corresponding proposed regulatory text. For example, for a response to the comment regarding whether existing and new vessels should be treated differently ("grandfathered") with respect to fire protection standards, see the Fire Protection discussion of comments section.

A towing company requested that the Coast Guard consider issuing a supplemental NPRM so the public and industry will be able to review the revisions to the rule



before it is final. A maritime company suggested that the Coast Guard urge towing companies to become familiar with tried and tested engineering guides and standards. The commenter also suggested that the Bridging Program remain functioning until all towing vessels are found to be compliant with the rule.

We disagree with this commenter about issuing a supplemental NPRM. This final rule reflects consideration of the thousands of comments we received on the NPRM we published in 2011.

Regarding urging towing companies to become familiar with tried and tested engineering guides and standards, we encourage towing companies to obtain knowledge from such guides and standards, but the purpose of this final rule is to establish specific requirements. This rule provides some flexibility (e.g., the option to choose a TSMS or Coast Guard inspection regime) but it is not a guidance document: it imposes requirements for which penalties may be applied if the requirements are not met. We have not made changes from the proposed rule based on this comment.

As for the Bridging Program, we are currently in Phase 2 of that program. During Phase 1, we conducted Industry Initiated Examinations for companies taking advantage of the opportunity to participate in this Coast Guard program.

Phase 2 is focused on Risk-Based Targeted Examinations and is scheduled to continue until this final rule becomes effective. Phase 3 will commence with the implementation of the new subchapter M towing vessel inspection regulations and issuance of Certificates of Inspection (COIs).

A commenter suggested that towing vessel officers and officer candidates be tested on the new towing vessel inspections that appear in the final rule. The commenter said the Coast Guard provides only one opportunity to test the "professional knowledge" of candidates for Apprentice Mate/Steersman, Mate/Pilot, and Master of Towing Vessels, and that for years, it tolerated insufficient knowledge of existing regulations throughout the towing industry by licensed officers, management, and even Coast Guard personnel assigned to boarding parties. He noted that the Coast Guard's Towing Vessel "Bridging" program has done a commendable job trying to reverse this trend.

Before imposing training requirements on those credentialed under 46 CFR subchapter B, we would want to receive comments in a separate rulemaking on such proposed requirements. As for Coast Guard personnel conducting inspections under subchapter M, it is our normal process to draft a specific Performance Qualification Standard to

ensure that inspectors are properly trained and fully capable of performing such inspections. Also in our oversight of TPOs, we will be sure to assess the TPO personnel's comprehension of subchapter M requirements.

One commenter felt that there is a lack of adequately trained lookouts and that providing the Master and Pilot with a trained, well-rested lookout can avoid many significant and costly towing accidents.

We agree that a trained, well-rested lookout would be more likely to help avoid towing accidents than a tired lookout who is not adequately trained. The rule does not contain specific training or hours of work requirements for lookouts, although such training and fatigue management may be part of a TSMS. We are considering developing a separate rulemaking for hours of service and crew endurance management based on our authority under 46 U.S.C. 8904(c). If we do so, we will publish a separate document in the Federal Register. We have made no changes from the proposed rule based on these comments.

Two commenters urged the Coast Guard to include a regulation that requires companies to provide mariners with a "letter of sea service" when the mariner is renewing their credentials.

We believe this suggestion is outside the scope of this rulemaking. We would want to receive comments on this suggestion in a separate rulemaking before imposing such a requirement.

An individual and an association felt that the "Bridging" book, updated with regulations from this final rule and other related regulations, should be provided in electronic format to provide a clear regulatory and policy statement to the towing industry and thereafter the Coast Guard should require the book or an updated electronic copy be carried aboard each towing vessel. One of these commenters noted that when the Coast Guard promulgated new oil pollution regulations in 1973, they provided an explanatory pamphlet and a required completion of an "open-book" test on the new regulations.

The Coast Guard notes that the Coast Guard's Bridging Program will cease to be applicable to towing vessels once this final rule becomes effective. We have prepared a Small Entities Guide which is available in the docket. With respect to an electronic form of subchapter M and other related regulations, we note that this final rule and subchapter M regulations that will become part of the CFR will be available through [www.gpo.gov/fdsys](http://www.gpo.gov/fdsys).

An association commented on the need for vessel route restrictions on a COI to be done on a vessel-by-vessel basis based upon reasonable safety considerations, and the need for adequate sea anchors and ground tackle for towing vessels that service oceans and coastwise routes.

A Coast Guard OCMI will make vessel-specific determinations regarding a vessel's route and other operating conditions which will be identified in the vessel's COI. Towing vessels come in a variety of shapes, sizes, and services, some of which could utilize anchors and other ground tackle as appropriate. An anchor that is appropriate for the towing vessel would not necessarily be adequate to accommodate the tow. It is incumbent upon the towing vessel owner or managing operator to examine their operating conditions and decide if having an anchor and other ground tackle is appropriate.

Two commenters suggested that doubler plating is not acceptable as a longstanding repair policy and recommended that the use of doubler plating be prohibited in regulation for vessels that have been inspected, unless it is approved by a Commandant.

The Coast Guard has not adopted this recommendation. Second, since this comment was submitted, ASTM has issued a national consensus standard for the use of doubler plates

as a permanent repair for vessels in all services. We have made no changes from the proposed rule based on these comments.

A commenter suggested that the NFPA standards referenced in the NPRM be updated to the current editions. This commenter also requested that we correct our references to NFPA 70, the National Electrical Code (NEC), which are listed incorrectly as "National Electric Code" in proposed §§ 136.110, 136.112, 143.120; 143.340(b)(6); 143.350(b); and Section II, Abbreviations.

The Coast Guard believes it is not necessary to update to the current editions of the NFPA standards at this time; in this final rule we have maintained the NFPA editions that we proposed in our NPRM. We have, however, corrected the error in our citations to NFPA 70, National Electrical Code (NEC).

A maritime company felt that the terminology used in the proposed rule is broad and could be interpreted differently depending on the reader. The commenter gave "major defects" and "substantial" as examples of items totally left up to the opinion of the individual auditor, and suggested that more precise terms be included to ensure consistency in the application of the regulations.

The Coast Guard notes that we did not use the term "major defects" in the NPRM. We did, however, use the term "major non-conformity," which we also defined. We also note that we have added or amended definitions based on many comments on our proposed rule.

In this final rule we do use the word "substantial," or a version of it, in our definition of "major conversion" in § 136.110 and in our revocation of TPO approval section, § 139.150. We agree that using more precise terms is appropriate when one is available, but sometimes a more flexible term is the only appropriate term to use. We believe this is true of our uses of the term "substantial" in this final rule and that the common understanding and definition of that term, combined with Coast Guard interpretation of that term in other regulations, does place restrictions on how individual auditors may interpret it. We have made no changes from the proposed rule based on this comment.

Lastly, a commenter suggested that the Coast Guard implement a notification system to remind vessel owners of deadlines that are approaching for their fleets.

The Coast Guard notes that it has a system that is currently used for other inspected vessels to provide owner and managing operators with notification of impending

compliance deadlines and plans to use this same system for towing vessels inspected under this subchapter. However, owners and managing operators are still ultimately responsible for meeting these deadlines and the associated inspection requirements including notification of the cognizant OCMI as required in part 136.

P. Crew Endurance Management Systems (CEMS)

We thank those who commented in response to our Hours of Service (HOS) and CEMS preamble discussion in the NPRM (76 FR 49991-49997, Aug. 11, 2011). These comments have helped to inform our consideration of HOS and CEMS issues confronting the maritime community.

As we stated in the NPRM, the Coast Guard would later request public comment on specific hours-of-service or crew-endurance-management regulatory text if it seeks to implement such requirements. We are considering developing a separate rulemaking for HOS and CEM based on our authority under 46 U.S.C. 8904(c). If we do so, we will publish a separate document in the Federal Register.

We have summarized HOS and CEM comments below as a means of sharing the valuable input we received on this topic we discussed in the NPRM, but we have limited our responses because we are not proposing HOS or CEM requirements in this document. In general, we have only



responded to these comments when we want to refer to what we said in the NPRM or point to currently available guidance or resources to address an issue raised. We have attempted to sort these comment summaries based on the questions we asked in the NPRM.

Some commenters wondered why, despite assembling sufficient data, the Coast Guard seeks additional information on potential requirements to increase uninterrupted sleep duration, while others described the Coast Guard's efforts to address hours of service as minimal and in need of revision. Another commenter said mariners resent the Coast Guard's failure to take a stand on maximum work hours and safe minimum manning requirements.

In the NPRM, the Coast Guard shared its views on potential HOS and CEMS program standards and requirements, and sought additional data and other information that we solicited through specific questions because, as we stated, we are "considering establishing hours of service standards and requirements for managing crew endurance, the ability for a crewmember to maintain performance within safety limits while enduring job-related physiological and psychological challenges." (76 FR 49991, Aug. 11, 2011.)

We received several comments suggesting that the traditional 2-watch system be replaced by a 3-watch system that provides more opportunity for increased uninterrupted sleep. One commenter said work durations should be reduced to a maximum of 21 days, with a phase-in of the 3-watch system within 10 years. Another commenter recommended that the Coast Guard develop a NVIC to provide one or more specific 2-watch rotation models that would meet the work hour limitations and minimum rest hour standards.

Several commenters noted that a "6-on, 6-off" schedule is unsafe or insufficient for allowing adequate rest. One commenter said an "8-hour on, 4-hour off; then 4-hour on, 8-hour off" schedule would achieve the maximum hours of rest while maintaining the current amount of crew. However, another commenter said an "8:8:4:4" schedule may allow for less total sleep over 24 hours than a "6:6:6:6" schedule.

We received several comments referencing crew manning with respect to potential work hour requirements. Some commenters said any towing vessel operating over 12 hours in any 24-hour period should be manned with two full crews, not just with two licensed officers. One commenter recommended a safe manning level that would support a 3-watch system for vessels towing laden tank barges

containing oil or hazardous material in bulk. Another commenter stated that the Coast Guard should require a relief pilot or three pilots onboard vessels (captain, after watch pilot, and swing pilot). Several commenters noted that crews are increasingly undertaking administrative duties, which can impact appropriate manning and mariners' opportunity for rest.

An element of a CEMS that might improve the awareness of the lack of opportunity for crew members to obtain adequate sleep would be to keep a record of each crew members' work and rest schedule. We note that NVIC 02-08, Enclosure (4), provides a CEM program evaluator checklist to capture areas that need improvement and ways to go about addressing those areas. Page 4 of Enclosure (4) provides an example of how a crew member might analyze their current work/rest schedule to identify any associated risks involving fatigue.

Several commenters suggested regulations that limit the workday to 12 hours in a 24-hour period for all mariners. One commenter said the NPRM should mandate maximum work-hour limitation for unlicensed personnel and maximum allowable work days and rotations.

We received numerous other comments. One commenter said that without clear and enforced work-hour regulations

and independent third-party inspections, towing boat companies will continue to exploit crews who are eager to remain employed.

One commenter urged the Coast Guard to promulgate HOS regulations consistent with NTSB Safety Recommendation M-99-1. A maritime company recommended minimum hours of rest similar to those set forth in the latest STCW (Manila) amendments (STCW 2010, Chapter VIII, Section A-VIII/1).

One association noted that the Coast Guard should have decided this issue ever since that association first presented it in May 2000 in National Mariners Association Report #R-201 titled "Mariners Speak Out on Violations of the 12-Hour Work Day."

We received several comments supporting the implementation of an HOS rule that would allow for sufficient time off to obtain at least 8 uninterrupted hours of sleep, or at least 7 hours of uninterrupted sleep and an additional sleep period in every 24 hour period. However, some commenters said the current statutory requirements in 46 U.S.C. 8104(g) are sufficient.

Several commenters opposed a requirement for a minimum of 7 to 8 hours of uninterrupted sleep for personnel on towing vessels. A maritime company responded that requirements should consist of a minimum of one 6-hour

period of uninterrupted rest within a 24-hour period and a minimum of 10 hours per day of total rest. Two commenters stated that the NPRM's focus on a minimum of 8 hours of uninterrupted sleep fails to acknowledge that a long sleep period in conjunction with a nap of shorter duration during a 24-hour period do not result in a compromised mental and physical state. Similarly, a commenter said it is not the number of uninterrupted hours of sleep per day that is important for performance and maintenance of alertness, but rather the total hours of sleep per 24 hours. Also, the commenter said data indicates that shift workers who work 8 hours and have 16 hours off to sleep only obtain 5 to 6 hours of sleep when sleep occurs at the "wrong" circadian time.

We received one comment saying the best method is to allow for anchor sleep to occur during one sleep opportunity and a nap sleep to occur during the second sleep opportunity. A maritime company responded that a Safe Manning Document, with prescribed watch requirements taking into account the vessels route and service requirements, would be the best way to ensure that sufficient qualified personnel are available for 12 hours of work per day.

A maritime company responded that the direct financial impact on its company would be minimal, as most of its vessels are already manned to allow for 7 or 8 hours of uninterrupted sleep (three in each department). However, the commenter noted that the company would lose some level of oversight and daily productivity in performing, for example, inspections and maintenance.

One commenter stated that sufficient uninterrupted sleep for vessel crew is the best insurance a vessel owner or managing operator can have against casualties. A maritime company stated that there would be a benefit to managing work periods in relation to safety, but setting a minimum number of consecutive hours without changing the 12-hour work period may make it difficult to manage vessel operations in a 24-hour period.

One commenter responded that allowing crews a 7-to 8-hour sleep opportunity does not mean crewmembers will routinely obtain 7 to 8 hours of uninterrupted sleep because it is impossible to mandate sleep.

We agree that a mandate to provide an opportunity for a sufficient number of hours of uninterrupted sleep will not guarantee that crewmembers sleep for the desired number of hours. But as we suggested in the NPRM, providing the opportunity "to increase uninterrupted sleep duration to a

threshold of at least 7 consecutive hours in one of the two available off periods in the two-watch system [would] increase the probability that crewmembers will have the opportunity to restore the cognitive abilities necessary to maintain situational awareness, even if the sleep environment is not optimal.” 76 FR 49996, Aug. 11, 2011. As noted above, log-keeping could be an effective way to gauge work and rest schedules throughout daily onboard operations.

A maritime company responded that while 7 hours of sleep is ideal, this does not work well in a 12-hour work schedule, and is still controversial even within the pioneering companies that initially implemented and tested the CEMS practices. The commenter concluded that the CEM training teaches that this - getting 7 hours of sleep - is the last and one of the least important facets of the program.

Another maritime company responded that, when given a 7- to 8-hour sleep opportunity, mariners cannot obtain 7-8 hours of uninterrupted sleep. Thus, it is common in the towing vessel industry to allow for two sleep opportunities where each opportunity allows for significant sleep such as on a “6:6:6:6” square watch schedule.

We received many comments, mostly from maritime companies, opposing a potential requirement for a minimum of 7 to 8 hours of uninterrupted sleep for personnel on towing vessels because no current watchstanding system meets this standard. Several commenters, including maritime companies, said the "6 on/6 off" watch schedule has worked for many years and should not be altered. A maritime company responded that the traditional "6 on/6 off" watch schedules would have to be changed to a "5/7/7/5," or "4/8/8/4," and a "12/12" schedule may even need to be worked depending on vessel operations. Another commenter expressed concern about the difficulty that operators would have in finding experienced personnel to meet the proposed watch standing standards.

One commenter responded that it is impossible to mandate that mariners "obtain a required number of hours of uninterrupted sleep, such as 7 - 8 hours." Instead, what is needed is to change mariner culture such that sufficient sleep is understood to be important for optimal performance, safety, and health.

A maritime company said a mandate would undoubtedly change the entire operation onboard, including meal hours, voyage planning, etc.



Another maritime company responded that a mandate that required mariners to obtain 7 to 8 hours of uninterrupted sleep would require the use of pharmacological agents or behavioral therapies (e.g., exercise, sleep hygiene, cognitive behavioral therapy for insomnia) that would enable mariners to achieve the mandated hours of uninterrupted sleep.

One commenter noted that many factors, including electronic gadgets, noise in the berthing spaces, and dietary considerations can have an adverse impact on a mariner's ability to obtain adequate sleep.

We received one comment that said requiring 7 to 8 hours of uninterrupted sleep would require one-third more crewmembers than the company presently can accommodate on board.

One commenter stated that recent data on sleep make it unlikely that crews on a "7:7:5:5" or an "8:8:4:4" watch schedule could obtain close to 7 or 8 hours of sleep, even when the endogenous drive to sleep coincided with a 7-or 8-hour rest period.

Two commenters said focus on nutrition and hydration has helped employees, but the companies have not changed watch schedules. Two other commenters responded that they have implemented CEMS, but one noted that it does not

require that mariners receive 7 to 8 hours of uninterrupted sleep.

An association and another commenter said a CEMS program alone cannot account for the fatigue caused by the existing 2-watch system on vessels in 24-hour service. The commenters stated that many mariners are unwilling to adjust their lives to fulfill the requirements of the system, and employers who force the program upon their mariners will encounter resentment and retention problems.

A maritime company responded that if a CEMS program enabled crews to obtain 7 to 8 hours of total sleep over a 24-hour period, such a program could be effective in combating fatigue. Another maritime company responded that any operation can benefit from CEM practices absent of work/rest changes. Diet, exercise, and environmental factors are all critical to improving operations and reducing fatigue.

Another maritime company responded that there is no evidence HOS restrictions reduce casualties and injuries, although this may be possible if crews can achieve 7 to 8 hours of total sleep on a day-to-day basis.

A maritime company commented that no existing programs could be considered equivalent to the Coast Guard CEMS program. The alternative would be a traditional ship "4/8"

watch schedule, which would require manning increases for most companies.

One commenter responded that, yes, a mandate would cause burden to smaller companies with limited resources. Another commenter said requiring a crew management program would increase the already large financial burden of implementing these proposed regulations on mid-sized and smaller companies, as well as an increased cost to the end consumer due to the necessity of larger crews.

A maritime company responded that for a full CEMS program, a 4- to 5- year period would be appropriate to allow for training, implementation, and auditing. Another maritime company responded that there is no appropriate phase-in period or method until evidence is provided that implementation of a new HOS requirement is effective.

In their comment to the docket (USCG-2006-24412-0187), the National Transportation Safety Board indicated they were pleased with the comprehensiveness, relevance, and timeliness of the literature that the Coast Guard cited in the NPRM, and believes that this literature aptly summarizes the state-of-the-art of human factors and physiological research on the effects of fatigue on human performance. The commenter went on to cite several

maritime and transportation accidents in which operator fatigue was identified as a contributing factor.

A maritime company noted that Coast Guard cites the Fatigue Avoidance Scheduling Tool (FAST) algorithm and produces nine figures (Figs 2-10) for assessing the effects of work and rest schedules on human health and performance, but there is no evidence in the FAST model that mariners will be able to obtain 7 to 8 hours of uninterrupted sleep on a "7:7:5:5" or "8:8:4:4" rectangular watch. Another maritime company disagreed with scientific studies that have indicated that uninterrupted sleep of less than 8 hours gives a worker a response time equivalent to someone with blood alcohol content of 0.05 - 0.08. Other commenters recommended a study on sleep requirements strictly related to inland waterways vessels.

We received a few comments supporting the structure of a CEMS program, and stating that before work hours or watchstanding practices are changed, a program including crew physical wellness and fatigue education and training must be put into place. One commenter supported additional training for crew members in the area of crew member fatigue and work and rest periods.

There are currently several opportunities to learn more about CEMS and mariner fatigue. We recommend talking

with your company safety officer for training options, or visit <http://www.uscg.mil/hq/cg5/cg5211/cems.asp> for more information on CEM.

One commenter said the concept of crew endurance is in effect a "Band-Aid" for a system that is broken, and that the Coast Guard has objective scientific evidence to take clear and definitive actions for establishing maximum work-hour limitations.

We received several comments stating that the Coast Guard's emphasis on uninterrupted sleep differs from the description of CEMS in NVIC 02-08, Criteria for Evaluating the Effectiveness of Crew Endurance Management System Implementation. Further, the commenters said NPRM's emphasis on 7 to 8 hours of uninterrupted sleep is troubling not only because of its inconsistency with prior Coast Guard publications describing the purpose of CEMS, but more importantly because it reflects an incomplete and selective treatment of the science behind sleep and watchstanding.

As discussed in NVIC 02-08, components of a CEMS that improve the safety culture and sleep quality include education, environmental changes, light management, trained coaches, and schedule changes. As indicated in Enclosure (4) of NVIC 02-08, a crew's watch schedule should be

evaluated based on the opportunity for each member to achieve a sufficient amount of uninterrupted sleep.

A maritime company stated that the CEMS demonstration project did not provide any data to support any changes in HOS or any endurance management standards.

We received several comments complaining about the Coast Guard's inaction regarding HOS and crew endurance. However, many commenters, mostly maritime companies, said the towing vessel inspection rule is not the proper place for requirements regarding fatigue management, which has implications for the entire maritime industry and that it would be more appropriate to address the issues raised in the NPRM relating to periods of rest and watchstanding in a separate rulemaking project particularly as it pertains to the marine industry as a whole. One commenter said any additional CEMS requirements should be identified in a company's TSMS and not in regulation.

Several commenters said emphasis on minimum required hours of sleep is not justified by science or data. One commenter said the NPRM is confusing and lead a reader and, more importantly, an inspector to draw the wrong conclusions about how a vessel watch should be set up. A maritime company said there is a need for literature that explores anchor sleep/nap sleep strategies; compares sleep

times on different watch schedules where the total amount of sleep and work opportunities are equivalent; evaluates the effectiveness of educational programs to change the culture of crews on board towing vessels; documents why mariners do not obtain 7 to 8 hours of sleep per 24 hours; and evaluates effective strategies for the treatment of sleep disorders.

One commenter said any requirement for hours of service standards and crew endurance management requirements should apply to double-crewed overnight boats and should not apply to "dinner bucket" or harbor boats.

We received two comments stating that the Coast Guard should withdraw its proposal until the following issues are addressed: current abuses of existing hours-of-service regulations for towing vessel officers; the lack of any hours-of service regulations for deckhands, engineers and unlicensed crewmembers; fatigue resulting from these abuses; and the undermanning of towing vessels as previously documented.

Another commenter said the NPRM included no mention of previous recommendations made by the Towing Safety Advisory Committee (TSAC) on CEMS and seeks comment on a different approach that was not previously brought to TSAC's attention.

We received several comments stating that the CEMS research being conducted by Northwestern University on inland towing vessels should influence the Coast Guard's direction on watchstanding and CEMS.

Q. Economic analysis comments

The Coast Guard received numerous comments from organizations and individuals regarding the costs and benefits associated with our proposed subchapter M regulations.

When we published the NPRM in 2011, we were particularly interested in the economic impact of implementing a TSMS, and whether there were alternatives to the TSMS and Coast Guard inspection options that could provide similar benefits at a lower cost.

Many commenters provided details and opinions regarding the costs and benefits of implementing the new subchapter M requirements. The comments involved the overall and specific costs and benefits of the requirements, the economic impact on small entities, and the requests for flexibilities that could provide relief to towing vessel owners and operators. We appreciate these comments and have attempted to integrate them into our Regulatory Analysis (RA). We address the specific topics in the sections of this preamble below.



## 1. Costs

We received numerous comments from towing vessel industry stakeholders regarding the specific costs of subchapter M parts as well as general remarks on overall costs of the new requirements. Many commenters expressed concern over subchapter M requirements imposing undue costs on vessel owners and operators without providing any information or further discussion.

One commenter stated the cost of hiring a naval architect for stability calculations would be in the tens of thousands of dollars per vessel to comply with construction and arrangement standards, and verification of compliance with those requirements.

As noted above in section IVI.N, the Coast Guard has added additional options for verification of compliance with part 144. Section 144.300(b) now offers three options for an existing vessel without a stability document to meet part 144 requirements: findings based on the vessel's operation or a history of satisfactory service, successful performance on operational tests, or a satisfactory stability assessment. None of these options would cost this operator tens of thousands of dollars. For example, the findings based on the vessel's operation or history of satisfactory service is a documentation activity that the

Coast Guard estimates will require 4 hours of time to compile at a cost of approximately \$200. Operational tests are undertaken as part of a standard inspection if needed at no additional cost to the operator.

The commenter also believed that additional equipment and redundancy systems - specifically propulsion, steering and related controls, electrical installations, pilothouse alerter system and towing machinery - required by part 143 are unnecessary.

As discussed earlier, part 143 no longer requires redundancy propulsion or steering for existing vessels, and has eliminated deferred electrical requirements in proposed §§ 143.340 through 143.360 for existing vessels. This final rule does retain a pilothouse alerter system requirement for towing vessels with overnight accommodations and alternating watches (shift work), but we have limited this requirement to towing vessels more than 65 feet in length. We also retained a requirement for towing machinery (e.g., capstans and winches) to be designed and installed to maximize control of the tow. Both the pilothouse alerter system and towing machinery requirements have a delayed implementation period for existing vessels: 5 years after the issuance of the first

COI for the vessel. For a more detailed discussion of these two requirements, please see section IV.M above.

One commenter stated that the Coast Guard estimated that bringing a single towing vessel into compliance with general requirements for propulsion, steering, and related controls, which appeared in § 143.405 in the NPRM, would cost \$20,000 and said that his company spent \$200,000 to replace steering and propulsion systems of a single vessel. The commenter estimated that to bring his company's 130 vessels into compliance under subchapter M, they would need to spend millions of dollars. The commenter also said that several thousand towing vessels would be affected, as opposed to the Coast Guard estimate of 26 towing vessels being affected by the § 143.405 requirements.

As discussed earlier, the Coast Guard acknowledges the potential for higher costs to retrofit existing vessels. In this final rule, the relevant requirements have been moved to § 143.585 and the applicability of these requirements has been reduced to only apply to new vessels (estimated at 88 per year) or those undergoing a major conversion (estimated at 13 per year) that move tank barges carrying oil or hazardous materials in bulk. We estimate the incremental cost to comply with § 143.585 during the

design and construction stage for new vessels or those undergoing major conversion to be \$10,000 per vessel.

Another commenter, referencing the previous commenter's remarks, estimated that company would incur a cost of \$40 million to comply with subchapter M. This commenter also suggested that subchapter M costs will be passed along to all the consumers in the U.S. economy thereby putting the U.S. economy at a disadvantage compared to other world economies.

The Coast Guard has considered the potential cost impact on individual companies and the economy in formulating the final rule. We balanced costs against the beneficial impacts of the rule in reducing the risk of towing vessel accidents and the resulting consequences, including fatalities, injuries, and oil spills. Based on information provided in the comments from the public on the costs of some requirements, we have revised the applicability of some those requirements to only newly constructed or refurbished vessels to mitigate the need for costly retrofits of existing vessels. We have also added alternative compliance options, such as allowing service history in lieu of stability tests for some vessels. We believe the resulting final rule fulfills Congress' mandate to bring towing vessels under an inspection system to

ensure and improve safety, while minimizing costs and potential impacts on the U.S. economy.

Another commenter expressed concern about the cost of the rule to vessel owners and operators and stated that the annual user fee could be "in the \$1,000 to \$2,000 range" for each vessel. The annual fee for towing vessels inspected under subchapter M will be \$1,030. As we note in section IV.D above, this is the existing annual inspection fee in 46 CFR 2.10-101 for any inspected vessel not listed in Table 2.10-101. This will be charged starting a year after the initial COI is issued and will remain the annual inspection fee until a specific annual inspection fee for towing vessels is promulgated through a separate rulemaking.

The same commenter also estimated that the negative impact on the economy, of (river-canal) lock delays due to towing vessel accidents, is only \$13.89 million of annual economic impact and 0.13 percent of total downtime, compared to an estimated total negative economic impact of \$10.8 trillion for all downtime on the lock.

The Coast Guard acknowledges that lock delays from towing accidents may only make up a small fraction of total lock delays. However, that does not negate the benefit that could be realized through the rule by improving towing

vessel safety, and reducing accidents and the resulting delays. Analyzing all causes of lock delays and methods for mitigating those delays not related to towing vessel accidents is outside the scope of this rulemaking.

One commenter submitted a number of comments on the additional operational costs due to subchapter M requirements that included the impact of periodic drydocking which may leave the work force idle, additional recordkeeping-staff requirements, the limited supply of shipyards which may increase the amount of time needed for repairs and drydocking, and increases in lending rates for marine loans from financial institutions due to actual or perceived risks.

With respect the impact of drydocking, according to a 2013 report, "For smaller vessels, routine drydocking can be done in the course of a single day."<sup>7</sup> The Coast Guard assumes 2 days of for each drydock inspection and has added an estimate of potential lost revenues during that period. Drydocking can be scheduled in advance with shipyards to coincide with rest requirements of crew, minimizing the potential for workforce idleness or longer waits times.

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<sup>7</sup> "Study of Engineering and Naval Architecture Costs for Use in Regulatory Analysis", 17 April 2013 by ABS Consulting, page 30.

The provisions of the rule are intended to improve safety of towing vessel operations, which over time should reduce actual risks.

One commenter asked for more detail on how the Coast Guard estimated the annual government costs at \$1.4 million. He interpreted this figure as a need to hire 14 new full time employees.

Coast Guard man-hours are calculated based on assuming only a few hours per vessel, although it might amount to a large number of hours considering that the affected population is more than 5,500 towing vessels. The Coast Guard is flexible with respect to meeting resource needs and may not hire new full time employees to implement the new subchapter M program.

Several commenters stated that the preliminary RA underestimated the various costs of subchapter M. In particular, one commenter believed that for existing vessels cost in man-hours needed to develop vessel plans is much higher than the estimate presented in the RA. The commenter estimated that cost of plan development alone will be as high as \$80,000, as opposed to the Coast Guard estimate of \$20,000. In addition to these costs, the commenter included an estimate of up to \$30,000 for

stability review, and \$100,000 to verify vessel compliance with requirements in parts 140 through 144.

The Coast Guard acknowledges the potential for higher costs for plan development and stability review. As a result, this final rule does not require an existing vessel to undergo a verification of compliance with design standards, so there is no plan development cost for an existing vessel unless that vessel either undergoes a major conversion or involves a new installation that is not a replacement-in-kind. In the case of a major conversion, the plans and documentation needed would be directly related to the scope of the conversion. In the case of an installation that is not a replacement-in-kind, the plans needed would be limited to the scope of the installation and to prove that the vessel meets stability standards. Moreover, the documentation required is not restricted to traditional drawings; sketches, schematics, diagrams, specifications, and photographs can be used to the degree needed to ensure the vessel complies with the standards used.

The same commenter suggested an alternative approach to these plans that they estimated would cost no more than \$30,000 per vessel: having a P.E. conduct a ship check to approve hull structure, piping, electrical machinery



systems and stability test by using in-house sketches and reviewing vessel structure and systems. The total costs of the program suggested by this commenter ranged from \$150,000 to \$180,000 when added to the other vessel plan costs. The Coast Guard views the suggested alternative approach to be similar to the surveys required under the TSMS option and, therefore, to be redundant. Further, the alternative approach suggested is not really an alternative since sketches, photographs, and similar documents are included in the group of sufficient documents needed for review in the case of either a major conversion or a new installation that is not a replacement-in-kind on an existing vessel.

Another commenter estimated that the cost of retrofitting an existing towing vessel to comply with subchapter M ranges from \$180,000 to \$300,000. This commenter also pointed out the additional cost of a TSMS, which he noted we estimated to be from \$61,000 to \$150,000 per company. The commenter added that none of these estimates accounts for the economic impact of time spent out of service while a vessel is being retrofitted.

The Coast Guard acknowledges that the costs to retrofit vessels to meet certain proposed requirement may have been higher than estimated in the NPRM. As a result

of these higher costs, the Coast Guard has removed those requirements for existing vessels, although the requirements are retained for new vessels as the incremental costs for a new vessel are lower. Removing certain requirements for existing vessels in Part 143 has the potential to reduce most, or perhaps all, of the \$180,000 to \$300,000 costs noted in the comment. With regards to the TSMS costs, the rule provides the Coast Guard inspection option as an alternative if developing and implementing a TSMS is deemed too costly by a vessel owner. In response to this and other comments, the Coast Guard has included an estimate of lost revenue in the Regulatory Analysis for the final rule for drydock inspections and activities to correct deficiencies that exceed 1 day in duration. We have made certain requirements no longer apply to existing vessels and has made many other changes to address that concern, as discussed in previous sections.

One commenter stated that subchapter M would require his company to change electrical systems on existing vessels at a cost of more than \$75,000 per vessel, and would potentially cost the company \$2,700,000 to comply.

While the Coast Guard finds it unlikely that it would cost over \$75,000 to bring a vessel in active service under normal engineering practice into compliance with subchapter

M, the Coast Guard acknowledges that some of the requirements proposed for electrical systems that required retrofitting of existing towing vessels could result in higher costs. In this final rule, we have made many of those requirements only applicable to new vessels. For more details, see discussion of electrical systems in section IV.M above.

One commenter estimated his company's average compliance cost to be \$225,000 per vessel or \$3.375 million for his entire fleet. A second commenter, relying on an AWO figure, estimates the cost of the proposed requirements to be as much as \$100,000 per towing vessel. A third commenter, representing a group of offshore towing vessel owners and operators, quoted previous comments on compliance costs and provided an average cost of \$180,000 to \$300,000 per vessel.

The Coast Guard appreciates the information from commenters on the potential costs of the proposed requirements in the NPRM. Given the potential for higher cost impacts, we have re-evaluated the requirements in the proposal to identify opportunities to minimize costs while still achieving risk reduction. As described previously, we have provided opportunities for lower-cost compliance options for some requirements and changed the applicability

of some requirements so that existing vessels would not have to undergo costly retrofits. The Coast Guard estimates that the average cost of compliance per vessel during the phase-in period is \$16,267 with an additional \$5,045 cost per company. The deficiency data from the Bridging Program and towing vessel boardings, which represents over 99 percent of the towing vessel fleet, indicates that many deficiencies are relatively rare (5 percent or less of vessels), making it unlikely that a vessel would incur the cost of every regulatory requirement.

Finally, other commenters stated that there are many hidden or unaccounted-for costs that the Coast Guard did not incorporate into its preliminary RA. These hidden costs are the same costs mentioned by a previous commenter: lost revenues and wages due to periodic inspections and repairs (including travel to inspection locations), crew costs to prepare for the inspection and undergo the questioning during the audit or survey, and management costs to oversee the TSMS and inspection scheduling.

Based on these and other comments, the Coast Guard acknowledges that potential for lost revenue and has added an estimate of lost revenues for drydocking and certain

repairs (please see Section 2.5 of the Regulatory Analysis for details).

With respect to costs to prepare for and undergo inspections, the Coast Guard estimates 40 hours of time to prepare for and undergo an inspection, which could be accomplished by the owner, operator, crew, or a combination. We have used the owner or operator wage rate to value the opportunity cost, which would be a slight over-estimate if crew instead performed the activities, which includes scheduling the inspections.

With regard to management costs to oversee a TSMS, the NPRM regulatory analysis provided an overall cost estimate for a TSMS that included management costs. For the final rule, the Coast Guard does not expect management costs for a TSMS to be incrementally different than management costs for an existing Safety Management System.

Additionally, one commenter believed that the preliminary RA did not account for increased shipping rates and transportation costs for industries dependent on river transportation.

The Coast Guard has added an evaluation of the potential for increased shipping rates and transportation costs in Appendix J of the Regulatory Analysis. The average cost per vessel of the final rule on a daily basis

represents an increase of 0.7 percent to 2.75% of barge daily operating costs, exclusive of fuel costs. The ability of towing vessel owners to pass along these cost increases to shippers will depend on many factors that make up the elasticity of demand, which will vary depending on the cargo, route, and transportation alternatives available. Towing vessels and barges typically carry commodities in bulk, including coal, petroleum, crude materials (such as forest products, sand, gravel, ores, scrap, and salt), and food and farm products (Figure J-1). The analysis of the impact of the increase in towing vessel daily operating costs on the shippers will be different for each commodity and route. An analysis of shipping rates for grain indicates that barge shipping rates are volatile, sometimes doubling from one year to the next, reacting quickly to sudden changes in export demand, weather constraints on the rivers, or larger-than-expected crops. The final rule requirements are expected to represent average increases in operating costs of 0.7 to 2.75 percent, only a small fraction of normal variability in rate. The market and shippers have adapted to fluctuations in shipping rates, so that increases of the size that may result from the final rule are within normal variations.

Further, the amount of increase in costs will vary from company to company. For example, many companies already have a TSMS, so this regulation would have a lesser impact on those companies cost structure than those companies that don't have one. The final rule brings all towing companies up to a minimum standard of safety and erodes the competitive advantages of those companies underinvesting in safety measures. By reducing accidents, incidents and casualties and resulting impacts including delays, the final rule may also increase the dependability and timeliness of shipping by barge and perhaps mitigate some limited aspects of the volatility of rates.

## 2. Benefits

We received many comments in support of the proposed rule. Many commenters said that SMSs are cost-beneficial and might lead to quantifiable benefits. Commenters suggested that SMSs might lead to benefits such as fewer vessel accidents and personal injuries, which would mean cost savings from reduced insurance premiums and avoidance of expenses such as vessel repairs and time out of service. However, no commenter provided any data or analysis that would directly quantify or monetize such benefits.

Numerous commenters, while agreeing with the proposed requirements in principle, expressed a concern that the

costs of complying with subchapter M would exceed the benefits and should be either avoided altogether or mitigated by following a risk-based approach. The majority of these commenters felt that benefits should be justified by each towing vessel's individual casualty history and risk. For example, a vessel that has not been involved in any accident but is not compliant with some or all of the requirements of subchapter M should not be considered a risk to the maritime industry and should be granted exemption or grandfathered from some or all of subchapter M requirements.

The Coast Guard agrees in part. The regulatory impact analysis we provide in the docket discusses at length why and how owners and operators of regulated entities will benefit from the requirements of the final rule. The fact that no incident has occurred yet on a particular vessel, especially one that does not comply with the requirements of the final rule, does not mean that the vessel does not present any risk to the maritime industry. In the next comment section, we addressed requests to obtain relief from certain costs commenters deemed unnecessary and will point to accommodations and flexibilities this final rule provides.



### 3. Flexibilities to Provide Relief to Towing Vessel Owners and Operators

We received numerous comments from the towing vessel owners and operators requesting greater flexibility in the rule to reduce its costs to them. They varied from full exemption from all subchapter M regulations to grandfathering on specific requirements. These comments are addressed in this section.

One commenter requested that the Coast Guard grant his company either an exemption from all requirements of subchapter M or an extension of 20 years of grandfathering on existing equipment on board his towing vessels. Another commenter requested some form of grandfather clause for existing fleets from proposed §§ 143.340 through 143.360 electrical system requirements citing complete rewiring costs at \$150,000 to \$210,000 for each vessel. Similarly, one commenter, without being specific, suggested that many requirements relating to mechanical and electrical equipment and structural standards for small operators should be relaxed or eliminated. Also, the AWO recommended that the Coast Guard delete sections on electrical system requirements in the final rule. Another commenter argued that subchapter M regulations are unnecessary and asked for an exemption or extension for longtime existing companies

that have always operated in full compliance with existing regulations because these new regulations may force them out of business.

The Coast Guard believes it inappropriate to grant an exemption from all new requirements under subchapter M or grandfathering of 20 years for existing equipment. However, the Coast Guard agrees that some of the requirements for machinery and electrical systems in part 143 may have been too burdensome and were unnecessary for existing vessels, so they have been removed from this final rule.

One commenter suggested that coal and grain barge handlers, which are generally small businesses, should not have the same TSMS requirements as larger companies. Another commenter asked Coast Guard to provide a template for a scaled-down version of a TSMS that might be less overwhelming for small towing vessel operations. A third commenter suggested that small operators should not be required to implement and maintain certain parts of the TSMS, such as the Behavioral-Based Safety program.

In the final rule, TSMS requirements are neither modified for different classes of towing vessels nor scaled down or exempted for small towing vessel operators. However, as previously noted, the TSMS is scalable. It can

be tailored to the operation of a small company and simplified to address a limited set of assets, process, and personnel. For a small business operator with a fleet of one or two vessels the TSMS may be a short document. Further, owners and operators can choose the Coast Guard inspection option.

Behavior-based safety has been described as an approach that focuses on what people do, analyzes why people take these actions, and then applies a research-supported intervention strategy to obtain a more desired outcome. (Geller, E. Scott, 2004). Subchapter M does not specifically prescribe the use of behavior-based safety to address specific elements of the TSMS, however some companies have chosen to use this approach to help modify employees behaviors to enhance safety within their organization.

We do not believe a template is needed to comply with TSMS requirements. As discussed in previous sections, we have clarified TSMS requirements in this rule and we intend to issue guidance documents related to TSMSs and TPOs as necessary, and these guides may contain examples of such documents.

One commenter stated that the TSMS should be the only approved method (to obtain a Certificate of Inspection)

under the final rule and recommended that the Coast Guard option be removed because a TSMS is scalable and can be developed in a cost-effective manner that many small companies can adapt to.

The Coast Guard disagrees that the TSMS should be mandatory. Although we recognize that the TSMS is scalable and can be developed in a cost-conducive manner, some towing companies may lack the resources or expertise to develop and implement a TSMS. The Coast Guard inspection option is intended to provide greater regulatory flexibility to such companies, or any that may not want to use a TSMS for other reasons. As noted above in section IV.B, offering this option is consistent with one of ABSG Consulting's recommendations in its 2006 final report to the Coast Guard. See docket submission USCG-2006-24412-0017.

#### 4. Small Business Impacts

We received several comments from small business owners and operators on the economic impact of subchapter M requirements. Some were opposed to the new requirements, but did not provide specific information or data about how they would be impacted. Others requested either an exemption or grandfathering from some or all of the requirements, so that they could avoid or mitigate the

economic impacts and continue to serve the towing vessel industry. A discussion of comments received on small business impacts follows.

Many commenters felt that subchapter M requirements would hurt small business owners and their employees and could put many small entities out of business. However, they did not provide specific data as to how much of an economic burden they expected the new requirements to place on their operational costs. The most specific comment was that new recordkeeping requirements alone would mean that the owner or operator would have to hire one or more new full time workers. Other commenters estimated the overall costs of subchapter M requirements in a range of \$100,000 to \$250,000 per vessel and several million dollars per company.

Other commenters expressed concern that their companies would not be able to pay for these unspecified subchapter M requirements, and therefore, either be forced out of business or be acquired by larger entities in the towing vessel industry. One commenter argued that lenders will delay lending and review existing ship mortgages to reassess their collateral positions, because many owners and operators of small towing vessel fleets will not be able to afford the costs to comply with subchapter M

requirements. Another commenter stated that his company would lose the ability to borrow against their boats if they cannot comply with the new regulations. One commenter estimated that no less than 20 percent of the aggregate U.S. towing fleet would be put out of business if the NPRM, as written, is published as a final rule. However, these commenters did not provide specific data or information to support their concerns.

The Coast Guard appreciates these comments on the potential economic impact of the proposed rule on small businesses. Based on these comments and other comments on the range of compliance costs, we have re-evaluated the requirements in the proposal to identify opportunities to minimize impacts on small businesses while still achieving risk reduction. As described previously, we have provided opportunities for lower-cost compliance options for some requirements and changed the applicability of some requirements so that existing vessels would not have to undergo costly retrofits. The Coast Guard estimates that the average cost of compliance per vessel during the phase-in period is \$16,267, with an additional \$5,045 cost per company. The deficiency data from the Bridging Program and towing vessel boardings (which represents over 99 percent of the towing vessel fleet) indicates that many

deficiencies are relatively rare (5 percent or less of vessels), making it unlikely that a vessel would incur the cost of every regulatory requirement.

## V. Regulatory Analyses

We developed this final rule after considering numerous statutes and executive orders related to rulemaking. Below, we summarize our analyses based on these statutes or executive orders.

### A. Regulatory Planning and Review

E.O.s 12866 ("Regulatory Planning and Review") and 13563 ("Improving Regulation and Regulatory Review") direct agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). E.O. 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility.

This final rule is a significant regulatory action under section 3(f) of E.O. 12866. The Office of Management and Budget (OMB) has reviewed it under that Order. It requires an assessment of potential costs and benefits under section 6(a)(3) of E.O. 12866. A final assessment is

available in the docket, and a summary follows.

A Final Regulatory Analysis (RA) is available in the docket where indicated under the "Public Participation and Request for Comments" section of this preamble. A summary of the RA follows:

This rulemaking implements section 415 of the Coast Guard and Maritime Transportation Act of 2004. The intent of the final rule is to promote safer work practices and reduce casualties on towing vessels by ensuring that inspected towing vessels adhere to prescribed safety standards and adopted safety management systems. The Coast Guard recognizes that establishing minimum standards for the towing vessel industry is necessary. Vessel operation, maintenance, and design must ensure the safe conduct of towing vessels. The final rule improves the safety and efficiency of the towing vessel industry.

In this final rule, the Coast Guard requires towing vessels subject to this rulemaking to undergo annual Coast Guard inspections or, in the alternative, be part of a safety management system. If the safety management system option is chosen, the rule requires companies that operate inspected towing vessels to create a TSMS, continue with existing systems that comply with the provisions of the International Safety Management (ISM) Code, or continue



under another system the Coast Guard determines to be equivalent to the TSMS.

This final rule would allow each towing vessel organization to customize its approach to meeting the requirements of the regulations, while it provides continuous oversight using audits, surveys, inspections, and reviews of safety data. This would improve the safety of towing vessels and provide greater flexibility and efficiency for towing vessel operators. As a result of this rulemaking, operators would be able to call upon third parties or the Coast Guard to conduct compliance activities when and where they are needed.

Although the 2004 Act added towing vessels to the list of vessels subject to Coast Guard inspection and the 2010 Act directed the Secretary to issue a final rule on the inspection of towing vessels containing towing safety management system provisions, they did not prescribe how this inspection program must be designed, developed and implemented. Therefore, we consider all the new parts under the new subchapter M as discretionary, but integral to the safe operations of towing vessels and necessary to fulfill Congress' intent in the 2004 and 2010 Acts.

Additionally, when towing vessels receive their Certificates of Inspection this will trigger the following requirements outside of subchapter M for inspected vessels:

- Part 136, Certification will require the assessment of user fees, per 46 U.S.C. 2110 and 46 CFR 2.10-101, Table 2.10-101; (requiring user fee for vessel inspection services and certifications).
- 46 CFR 15.820(a) requires a Chief Engineer on certain inland towing vessels.
- 33 CFR 155.710(e)(1) requires a Person-in-Charge (PIC) for certain fuel transfers on towing vessels to be credentialed officer or to hold an MMC with a Tankerman-PIC endorsement.

See the "Discussion of Final Rule" section for a detailed discussion of this final rule and see the RA for a detailed discussion of costs, benefits and alternatives considered. Table 3 summarizes the impacts of this rulemaking.

Table 3: Summary of Affected Population, Costs and Benefits

Category	Final Rule
Populations	

Applicability	All U.S. flag towing vessels engaged in pushing, pulling, or hauling alongside, with exceptions for work boats and limited service towing vessels
Affected Population	5,509 vessels
	1,086 companies
Costs	
Total Costs (\$ millions, 7% discount rate)	\$41.5 (annualized)
	\$291.2 (10-year)
Industry Costs (\$ millions, 7% discount rate)	\$32.7 (annualized)
	\$229.6 (10-year)
Net Government Costs (\$ millions, 7% discount rate)	\$8.8 (annualized)
	\$61.6 (10-year)
Benefits	
Benefits (\$ millions, 7% discount rate)	\$46.4 (annualized, millions)
	\$325.6 (10-year)
Unquantified Benefits	Reduced congestion and delays from lock, bridge and waterway closures Reduced risk of low and medium severity towing vessel accidents and accidents with limited information in the case report

Table 4 summarizes the changes in the final rule as we moved from the NPRM to this final rule, and Table 5 below summarizes the changes in the RA. These changes to the RA came from either policy changes, public comments received after the publication of the NPRM, or simply from updating

the data and information that informed our regulatory analysis.

Table 4: Summary of Notable Changes from NPRM to Final Rule

NPRM section number	FR section number	Summary	Impact on Regulatory Analysis
	1.03-55	Added section: "Appeals from decisions or actions under subchapter M of this chapter."	Added costs for appeals
15.535	15.535	Clarified that the requirements of § 15.515 apply in addition to those of this section, and that the requirements of this section apply regardless of assistance towing or being under 200 GRT	Included cost of compliance with § 15.515
	136.172	Maintains current requirements for existing towing vessels for 2 years or until the vessel obtains a COI, whichever period is shorter	Maintains existing costs for existing vessels
138.310	138.310	Added ISO 9001-2008 as an option for auditor/assessor compliance	No change - adds compliance flexibility
138.505	138.505	Edited section to specify where in the Coast Guard audits should be sent.	No change - clarifies who receives reports
139.110	139.110	Introduced delineation that recognized classification societies qualify to do TPO audits and authorized classification societies to do as TPO surveys	No change - adds compliance flexibility
139.120	139.120	Changed address to which applications should be sent, added paragraph requiring applications to include information about the organization's means of assuring the availability of its personnel	No change - clarifies who receives reports and assures availability of personnel
139.130	139.130	For auditors, added "licensed mariner" to a list of types of relevant marine experience, and added ISO 9001-2008 as an option in addition to ISO 9001-2000	No change - adds compliance flexibility

139.160	139.160	Removed paragraph saying that the Coast Guard may require a replacement of a third-party auditor	No change - adds compliance flexibility
140.435	140.435	Deleted requirements for certain vessels to carry automatic external defibrillators and train crewmembers in their use	Removed costs of AEDs
140.505 and 140.520	140.505	Eliminated § 140.520 requirements for maintaining personnel hazard exposure and medical records and revised § 140.505 requirement to keep records of health and safety incidents, including any medical records associated with the incidents	Greatly reduced costs for keeping records on crewmember health by limiting them to those associated with incidents, added costs for records of safety incidents
140.605	140.605	Clarified requirements associated with stability letter are only applicable to vessels that already have a stability letter, added paragraph requiring all owners or operators to maintain watertight integrity and stability	Revised costs to include alternative methods of compliance
140.645	140.645	Added paragraph accepting credentialed mariners as meeting the requirements of this section	No change - adds compliance flexibility
140.915	140.915	Added examinations and tests, and fire-detection and fixed fire-extinguishing systems to the list of items that must be recorded in the TVR, and specified requirements for items recorded electronically	Revised costs for TVR
141.305	141.305	Changes to Table 141.305: Removed buoyant apparatus and life float references in cold water operation; removed life float and inflatable buoyant apparatus references in warm water operation; moved inflatable liferaft with SOLAS A pack to bottom of both cold and warm water operation to delineate increasing level of safety hierarchy; and inserted the term "rigid" in front	No change - improves readability and referencing; substitution allowance provides compliance flexibility.

		of buoyant apparatus so as not to confuse with inflatable buoyant apparatus. Added additional substitution options for survival craft in § 141.305(d) (2) (ii)-(iv) based on increasing level of safety hierarchy of same.	
141.330	141.330	Removed reference to Table 141.305 and limitations on approval of survival craft starting in 2015, added the option of using a skiff for towing vessels that only operate within 3 miles of shore, rephrased section	No change - adds compliance flexibility
141.340	141.340	Replaced reference to 46 CFR 199.620(c) with a reference to several approval series, specified and rephrased requirements for lifejackets in TSMS	No change - adds compliance flexibility
141.360	141.360	Replaced reference to 46 CFR 199.70 with a reference to several approval series, specified and rephrased requirements for lifebuoys in TSMS	No change - adds compliance flexibility
142.215	142.215	Rephrased for clarity, added paragraph allowing approval by the Coast Guard, OCMI, TPO, or a NRTL of new installations of fire-extinguishing or fire-detection equipment	No change - adds compliance flexibility
142.225	142.225	Rephrased for clarity, added FM 6050 as an acceptable standard for storage cabinet design	No change - adds compliance flexibility
143.200	143.200	Delayed implementation of part 143 requirements for existing vessels, consolidated applicability and grandfathering requirements from other subparts into one section	Removed certain costs for existing vessels, delays other costs
143.245	143.230	Rephrased for clarity, added requirements for alarms at operating stations, removed language describing possible exceptions	Added costs for alarms at additional operating stations
143.420	143.595	Renamed, deleted requirements for propulsion engine fuel lines and independent auxiliary steering systems	Removed costs for existing vessels

144.315	144.300, 144.315	Added possible standards for an existing vessel without a stability document to meet	Revised costs to include alternative methods of compliance
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Table 5: Changes in Regulatory Analysis from NPRM to Final Rule

Element of Regulatory Analysis	Reason Changed	Explanation of Change
Credentialing requirements under part 15.	Public comment.	Added cost estimate for requirements in part 15 that are triggered when vessel becomes "inspected".  10-year undiscounted estimated at \$2.8 million.
Parts 141 Lifesaving and 142 Fire Protection	Public comment.	Added cost estimates for requirements in Parts.  10-year undiscounted estimated at \$27.8 million for Part 141 and \$7.0 million for Part 142.
Part 136 Certification and Part 137 Vessel Compliance	Policy change.	Added cost estimates for appeals.
Part 140 Operations	Public comment.	Added costs for certain operational

		requirements, including navigation assessments.
Machinery and electrical systems equipment under part 143	Policy change.	Grandfathering of existing vessels or vessels whose construction began before the effective date of the final rule for §§ 143.555, 143.560, 143.565, 143.570, 143.575, 143.585, 143.605.  10-year undiscounted estimated cost is \$41.4 million in the final rule and could exceed \$300 million if not grandfathered (see Alternative 3).
Construction and arrangement under part 144	Policy change.	Grandfathering of existing vessels or vessels whose construction began before the effective date of the final rule for §§ 144.135 and 144.145(b).  10-year undiscounted estimated cost is \$5.4 million in the final rule.
Affected population.	Update to reflect current fleet composition and more comprehensive data sources.	Reviewed current data sources on towing vessel fleet and ownership and increased affected population



		estimate to 5,509 (from 5,208 in the NPRM)
Costs of equipment or activities.	Update to reflect current prices.	Collected current price data or updated prices used in NPRM by CPI.
	Public comment.	Incorporated public estimates for drydock inspections in the range of costs. Added estimate for lost revenues during certain activities.
Wages.	Updated BLS data.	Revised labor cost by using May 2013 BLS data.
Benefit valuation.	Updated value of a statistical life (VSL) and injuries values.	Updated VSL and injury valuation to reflect current guidance.
Accident analysis.	Updated data from recent years.	Reflected most recent 12 years of accident history (2002 to 2013).
Impacts of Rule Requirements on Cost to Shippers	Public comment.	Added assessment of cost to shippers in Appendix J.

#### Affected Population

We estimate that 1,086 owners and managing operators (companies) would incur additional costs from this rulemaking. The rulemaking would affect a total of 5,509 vessels owned and operated by these companies. Our cost assessment includes existing and new vessels.

#### Costs

We estimated costs resulting from the addition of subchapter M and costs in other subchapters that result from the inclusion of towing vessels as inspected vessels, to industry and government. During the initial phase-in period (years 1 and 2), we estimate the annual cost to industry from subchapter M requirements of the rulemaking to range from \$15.8 million to \$26.5 million (non-discounted). After the initial phase-in, the annual costs to industry from subchapter M requirements range from \$19.2 million to \$56.4 million (non-discounted). We estimate the total present value cost to industry from subchapter M requirements over the 10-year period of analysis is \$227.7 million, discounted at 7 percent, and \$286.8 million, discounted at 3 percent. Over the period of analysis, we estimate the annualized costs to be \$32.4 million at 7 percent and \$33.6 million at 3 percent. Table 6 summarizes the costs of this final rule to industry for subchapter M requirements.

Table 6: Summary of Subchapter M Costs to Industry (\$ Millions)

Year	Undiscounted	Discounted	
		7%	3%
1	\$26.5	\$24.8	\$25.7
2	\$15.8	\$13.8	\$14.9

3	\$19.2	\$15.7	\$17.6
4	\$22.6	\$17.2	\$20.1
5	\$33.0	\$23.6	\$28.5
6	\$35.7	\$23.8	\$29.9
7	\$44.5	\$27.7	\$36.2
8	\$56.4	\$32.8	\$44.5
9	\$46.0	\$25.0	\$35.3
10	\$45.8	\$23.3	\$34.1
Total*	\$345.6	\$227.7	\$286.8
Annualized		\$32.4	\$33.6

\*Values may not total due to rounding

Additional costs to industry for requirements outside of subchapter M will result from the triggering of certification for persons in charge during oil transfer requirements by designating towing vessels as “inspected”. We estimate the total present value cost of the industry non-subchapter M requirements over the 10-year period of analysis to be \$1.9 million, discounted at 7 percent, and \$2.4 million, discounted at 3 percent. Over the period of analysis, we estimate the annualized industry costs for requirements outside of subchapter M to be \$0.3 million at 7 percent and 3 percent. Table 7 summarizes the costs of this final rule to industry.

Table 7: Summary of Cost to Industry for Requirements Outside of Subchapter M(\$ Millions)

Year	Undiscounted	Discounted	
		7%	3%
1	\$0.0	\$0.0	\$0.0

2	\$0.0	\$0.0	\$0.0
3	\$0.4	\$0.4	\$0.4
4	\$0.4	\$0.3	\$0.4
5	\$0.4	\$0.3	\$0.3
6	\$0.4	\$0.3	\$0.3
7	\$0.0	\$0.0	\$0.0
8	\$0.4	\$0.3	\$0.3
9	\$0.4	\$0.2	\$0.3
10	\$0.4	\$0.2	\$0.3
Total*	\$2.8	\$1.9	\$2.4
Annualized		\$0.3	\$0.3

\*Values may not total due to rounding

We estimate the total cost to industry over the 10-year period of analysis to be \$229.6 million, discounted at 7 percent, and \$289.1 million, discounted at 3 percent. Over the period of analysis, we estimate the annualized costs to industry to be \$32.7 million at 7 percent and \$33.9 million at 3 percent. Table 8 shows these estimates.

Table 8: Summary of Total Cost to Industry  
(\$ Millions)

Year	Undiscounted	Discounted	
		7%	3%
1	\$26.5	\$24.8	\$25.7
2	\$15.8	\$13.8	\$14.9
3	\$19.7	\$16.1	\$18.0
4	\$23.0	\$17.5	\$20.4
5	\$33.4	\$23.8	\$28.8
6	\$36.1	\$24.0	\$30.2
7	\$44.5	\$27.7	\$36.2
8	\$56.8	\$33.1	\$44.8
9	\$46.4	\$25.3	\$35.6
10	\$46.2	\$23.5	\$34.4
Total*	\$348.4	\$229.6	\$289.1

Annualized	\$32.7	\$33.9
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\*Values may not total due to rounding

We anticipate that the government will incur costs. For towing vessels that choose to comply with annual Coast Guard inspections, the government will incur costs to conduct those inspections. For other vessels choosing the TSMS option to comply, the government will incur costs to review applications for a TSMS, conduct random boardings and compliance examinations, and oversee third parties.

Table 9A displays the full cost to the government. We estimate the total present value full cost to government over the 10-year period of analysis to be \$85.6 million discounted at 7 percent and \$110.6 million discounted at 3 percent. Annualized full costs to government are about \$12.2 million at 7 percent and \$13.0 million at 3 percent discount rates.

Table 9A: Summary of Full Cost to Government  
(\$ Millions)

Year	Undiscounted	Discounted	
		7%	3%
1	\$0.1	\$0.1	\$0.1
2	\$0.1	\$0.1	\$0.1
3	\$9.5	\$7.7	\$8.7
4	\$12.5	\$9.5	\$11.1
5	\$15.4	\$11.0	\$13.3
6	\$17.2	\$11.4	\$14.4
7	\$20.7	\$12.9	\$16.8
8	\$20.5	\$11.9	\$16.1
9	\$20.0	\$10.9	\$15.3

10	\$19.7	\$10.0	\$14.7
Total	<b>\$135.6</b>	<b>\$85.6</b>	<b>\$110.6</b>
Annualized		<b>\$12.2</b>	<b>\$13.0</b>

The user fee paid by towing vessel owners and operators for obtaining the COI is a transfer from industry to the government. To avoid double-counting of costs, we account for this transfer by subtracting the amount of the user fee to be collected from the government costs to calculate government costs net of the transfer. Table 9B shows the amount of the user fees to be collected over the 10-year analysis period.

Table 9B: Transfer: Undiscounted User Fees to be Collected by the Government in Part 136 by Year (\$ million)

<b>Year</b>	<b>Total Number of User Fees Collected</b>	<b>Total Annual User Fees Transferred to Govt.* (\$ million)</b>
1	0	\$0.000
2	0	\$0.000
3	1,604	\$1.652
4	3,150	\$3.245
5	4,352	\$4.483
6	5,509	\$5.674
7	5,509	\$5.674
8	5,509	\$5.674
9	5,509	\$5.674
10	5,509	\$5.674
Total		\$37.751

\* The total annual user fees are calculated by multiplying the total number of user fees collected by

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the user fee, \$1,030.

We estimate the total present value cost to government net of the transfer via user fee over the 10-year period of analysis to be \$61.6 million discounted at 7 percent and \$79.5 million discounted at 3 percent. Annualized net government costs are about \$8.8 million at 7 percent and \$9.3 million at 3 percent discount rates. Table 9C summarizes the net costs of this rule to government after deducting the user fee transfer.

Table 9C: Summary of Government Cost Net of Transfer Payment  
(\$ Millions)

Year	Undiscounted	Discounted	
		7%	3%
1	\$0.1	\$0.1	\$0.1
2	\$0.1	\$0.1	\$0.1
3	\$7.8	\$6.3	\$7.1
4	\$9.2	\$7.0	\$8.2
5	\$10.9	\$7.8	\$9.4
6	\$11.4	\$7.6	\$9.6
7	\$14.9	\$9.3	\$12.1
8	\$14.7	\$8.6	\$11.6
9	\$14.2	\$7.7	\$10.9
10	\$14.0	\$7.1	\$10.4
Total*	\$97.3	\$61.6	\$79.5
Annualized		\$8.8	\$9.3

\* Values may not total due to rounding

We estimate the combined total 10-year present value cost of the rulemaking to industry and government is \$291.2 million discounted at 7 percent, and \$368.6 million discounted at 3 percent. The annualized costs are \$41.5 million at 7 percent and \$43.2 million at 3 percent.

Table 10 summarizes the total combined costs of this rule.

Table 10: Summary of Total Cost  
(Subchapter M and Non-Subchapter M Industry Costs, Net Government Costs)  
(\$ Millions)

Year	Undiscounted	Discounted	
		7%	3%
1	\$26.6	\$24.9	\$25.8
2	\$15.9	\$13.8	\$14.9
3	\$27.5	\$22.4	\$25.1
4	\$32.2	\$24.5	\$28.6
5	\$44.3	\$31.6	\$38.2
6	\$47.5	\$31.7	\$39.8
7	\$59.5	\$37.0	\$48.4
8	\$71.5	\$41.6	\$56.4
9	\$60.6	\$33.0	\$46.5
10	\$60.2	\$30.6	\$44.8
Total*	\$445.8	\$291.2	\$368.6
Annualized		\$41.5	\$43.2

\* Values may not total due to rounding

Table 11 summarizes the total combined costs of this rule by part.

Table 11: Summary of Total Annualized Cost by Part

Part	Annualized Costs (7%, millions)
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Costs to Industry	
136: Certification	\$3.4
137: Compliance	\$10.8
138: Towing Safety Management System	\$2.0
139: Third-Party Organizations	\$0.04
140: Operations	\$7.3
141: Lifesaving	\$3.2
142: Firefighting	\$0.8
143: Mechanical and Electrical	\$4.0
144: Construction and Arrangement	\$0.6
Total Subchapter M Costs*	\$32.4
Non-Subchapter M Costs	\$0.3
Total to Industry*	\$32.7
Net Government Costs	\$8.8
Total Rule Cost*	<b>\$41.5</b>

\*Values may not total due to rounding

The total, 10-year undiscounted costs of statutory mandate requirements are as follows:

- \$38.1 million for the annual vessel inspection fees under 46 CFR 2.10-101, Table 2.10-101 for vessels requiring a certification of inspection.
- \$2.8 million for credentialing requirements outside of subchapter M that are triggered when a vessel becomes "inspected".

#### Economic Impacts of Towing Vessel Casualties

Towing vessel casualties are incidents (i.e., accidents) that involve the towing vessel and possibly other vessels such as barges, other commercial vessels, and

recreational vessels. Towing vessel accidents can cause a variety of negative economic impacts, including loss of life, injuries, property damage, delays on transportation infrastructure, and damage to the environment.

Based on Coast Guard Marine Information for Safety and Law Enforcement (MISLE) data for the recent period of 2002-2013, towing vessel accidents are associated with 18 fatalities per year. Towing vessel accidents also result in an average of 37 reportable injuries per year (for the period of 2002-2013). Table 12 summarizes some of the negative impacts resulting from towing vessel accidents.

Table 12: Negative Impacts from Towing Vessel Accidents (2002-2013)

<u>Impact</u>	<u>Total Effects</u>	<u>Total Monetary Damages (in Millions)</u>	<u>Average Per Year</u>	<u>Average Monetary Damage Per Year (in Millions)</u>
Fatalities (See Note 1)	217	\$1,974.700	18	\$164.558
Injuries	443	\$300.145	37	\$25.012
Property Damage (See Note 2)	603 incidents with property damage	\$600.055	50	\$50.005
Gallons of Oil Spilled	5,192,937 gallons of oil spilled	\$408.251 (See Note 3)	432,745	\$34.021
Total Damage		\$3,283.151		\$273.596

Notes: (1) Fatality values are based on a \$9.1 million value of a

statistical life referenced in Guidance on Treatment of the Economic Value of a Statistical Life in U.S. Department of Transportation Analyses, US DOT, 2013, available at <http://www.dot.gov/sites/dot.dev/files/docs/VSL%20Guidance%202013.pdf>.

(2) Property damage includes property and cargo damages as reported in MISLE.

(3) Oil spilled damages are based on a \$254 damage per gallon of oil spilled as indicated by Inspection of Towing Vessels, Notice of Proposed Rulemaking, Preliminary Regulatory Analysis and Initial Regulatory Flexibility Analysis, USCG-2006-24412, July 2011, available at <http://www.regulations.gov/#!documentDetail;D=USCG-2006-24412-0002> adjusted for actual costs for certain high volume gallons of oil spilled gallons of oil spilled spills reported to the National Pollution Funds Center.

### Benefits of the Towing Vessel Final Rule

The Coast Guard developed the requirements in the rule by researching both the human factors and equipment failures that contribute to the risk of towing vessel accidents. We believe that the rule would comprehensively address a wide range of risks of towing vessel accidents and supports the main goal of improving safety in the towing industry. The primary benefit of the final rule is an increase in vessel safety and a resulting decrease in the risk of towing vessel accidents and their consequences.

Based on Coast Guard investigation findings for towing vessel accident cases from 2002-2013, we estimate that the final rule would lead to significant reductions in fatalities, injuries, property damaged, and oil spilled. These improvements in safety are expected to occur over a 10-year period as the various provisions of the final rule are phased-in. Accounting for this phase-in of

requirements and resulting benefits, we estimate total 10-year discounted benefits at \$325.6 million discounted at 7 percent and \$403.8 million discounted at 3 percent. Over the same period of analysis, we estimate annualized benefits of the final rule to be \$46.4 million at a 7 percent discount rate and about \$47.3 million at a 3 percent discount rate, respectively. Table 13 displays the monetized benefits of this final rule associated with reducing fatalities, injuries, property damage, and oil spilled, resulting from towing vessel accidents.

Table 13: Total Benefits  
(\$ Millions) \*

Total			
	Undiscounted Benefits	Discounted Benefits	
Year		7%	3%
1	\$26.2	\$24.5	\$25.4
2	\$26.2	\$22.9	\$24.7
3	\$50.8	\$41.4	\$46.5
4	\$52.0	\$39.7	\$46.2
5	\$53.2	\$37.9	\$45.9
6	\$54.4	\$36.3	\$45.6
7	\$54.4	\$33.9	\$44.3
8	\$54.4	\$31.7	\$43.0
9	\$54.4	\$29.6	\$41.7
10	\$54.4	\$27.7	\$40.5
Total	\$480.6	\$325.6	\$403.8
Annualized		\$46.4	\$47.3

\* Values may not total due to rounding.

Table 14 displays the annualized benefits broken out by Part. Part 140 accounts for the largest share of the

benefits at \$17.1 million annualized at a 7 percent discount rate.

Table 14: Total Annualized Benefits by Part  
(\$ Millions)\*

<u>Part</u>	<u>Annualized</u> <u>Quantified Benefits</u>
	7%
136-138	\$3.1
139	\$1.1
140	\$17.1
141	\$4.4
142	\$1.2
143	\$11.1
144	\$8.3
Total Rule Benefits	\$46.4

\* Values may not total due to rounding.

#### Unquantified Benefits

These estimates do not include the value of benefits that we have not quantified, including preventing delays and congestion due to towing vessel accidents. We are unable to monetize the value of preventing other consequences of towing vessel accidents, including delays and congestion, due to a lack of data and information. However, as discussed in the Regulatory Analysis available in the docket, the potential value of other benefits could be substantial if towing vessel accidents cause long waterway, bridge, or road closures. For large accidents that result in long delays, the economic consequences may include the following:

- Productivity losses and operating costs for stalled barge and other traffic;
- Delays in the acquisition of production inputs that can impact timely operation of manufacturing or other processes;
- Blockages of U.S. exports that can result in decreased revenue from importing foreign companies;
- Loss of quality for industries dealing with time sensitive products or products with a limited shelf life, such as commercial fishing seafood processors, seafood dealers, or other food processors and manufacturers; and
- Reduced recreational opportunities, resulting in social welfare losses.

To estimate the amount of delay caused by towing vessel incidents, we examined the 20 most severe recorded towing vessel incidents from MISLE and sample cases for these other consequences and quantified their effects. Of the 20 incidents we were able to use archived journal sources and Coast Guard incident reports to estimate number of vessels subject to a delay and total hours of delay for 13 incidents. Based on our analysis detailed in the Regulatory Analysis, these 13 incidents resulted in 28,883

vessel hours of delay. If we apply a low end estimate of the costs to operate a towing vessel per hour, the delay costs for these 13 incidents at least exceeded \$10 million. However, we do not have sufficient information to scale up these examples to a nationwide estimate.

In addition, the evaluation of potential benefits from reducing the risk of accidents is dependent upon the amount of information and findings in the report of the incident found in MISLE. The benefit estimates do not include accidents for which there was a lack of detailed information in the case report to make a risk reduction determination, resulting in an underestimation of benefits. Lack of data in the cases of the low and medium severity incidents, implies that our benefits are underestimated.

#### Comparison of Costs to Benefits

The estimate for the total costs of the rule is \$41.5 million (annualized at a 7 percent discount rate). The estimate for monetized benefits is \$46.4 million (annualized at a 7 percent discount rate), based on the mitigation of risks from towing vessel accidents in terms of lives lost, injuries, oil spilled, and property damage. Subtracting the monetized costs from the monetized benefits yields a net benefit of \$4.9 million. We also identified, but did not monetize, other benefits from reducing the risk

of accidents that have secondary consequences of delays and congestions on waterways, highways, and railroads.

As shown in Table 15 below, by part, the operational requirements in part 140 have the highest net benefits at \$9.8 million. Parts 139 and 141 through 144 also have positive net benefits. Parts 136 through 138 have negative net benefits of -\$13.2 million. Parts 136 through 138 contain the requirements for inspection, obtaining COIs, and TSMSs. These activities facilitate the enforcement of the requirements in the other parts, so it is difficult to separate benefits solely for the activities in Parts 136 through 138.

Table 15: Comparison of Benefits and Costs by Part  
Annualized, 7 Percent (\$ Millions)

Part	Description	Costs	Benefits	Net Benefits
<u>Costs to Industry</u>				
136-138	Certification, Inspection, TSMS	\$16.3	\$3.1	(\$13.2)
139	TPOs	\$0.04	\$1.1	\$1.1
140	Operations	\$7.3	\$17.1	\$9.8
141	Lifesaving	\$3.2	\$4.4	\$1.2
142	Fire Prevention	\$0.8	\$1.2	\$0.4
143	Mechanical and Electrical	\$4.0	\$11.1	\$7.1
144	Construction and Arrangements	\$0.6	\$8.3	\$7.7
Non-subchapter M Costs		\$0.3	NQ*	NQ*
<u>Government Cost</u>		\$8.8	NQ*	NQ*
<u>Total Combined Cost of Final Rule</u>		<b>\$41.5</b>	<b>\$46.4</b>	<b>\$4.9</b>

\* NQ = Not quantified

Totals may not add due to rounding.



Overall, the regulatory analysis indicates that the preferred alternative provides owners and managing operators of towing vessels the ability to customize compliance to their individual business models, move the industry into inspected status, and improve safety.

#### Alternatives

At all stages of this rulemaking, including the development of the NPRM, review of public comments, and the preparation of this final rule, we considered numerous alternatives to the rule requirements. During this process, we weighed the burden posed by a requirement or group of requirements against baseline risk and potential risk reduction with the goal of improving safety of crew and public, and enhancing environmental protection, while minimizing the cost burden on industry and government. We have quantified the costs and benefits for three alternatives that are illustrative of the types and range of the many alternatives that considered throughout the rulemaking process. The alternatives explored include the following:

- Alternative 1: Limits the regulatory requirements to only the minimum required to meet the statutory

requirements of inspecting towing vessels. Parts 136 to 139 are retained, related to conducting inspections, issuing COIs, using TSMS's and overseeing third parties. All operational, fire and safety, equipment and design requirements are removed.

- Alternative 2: Delays the operational requirements (Part 140) from becoming effective in Year 3 of the rule (after the 2-year implementation period) to after the first round of initial inspections and issuance of COIs is complete (Year 6).
- Alternative 3: Does not "grandfather" existing vessels for certain requirements in part 143 (i.e., these requirements would apply to both new and existing vessels).

Alternatives 1-3 have net costs, compared to net benefits under the preferred alternative. A summary of the costs and benefits of the alternatives are presented in Table 16.

Table 16: Summary of Alternatives  
(\$ millions, 7% discount rate)

Alternative	Summary	Annualized Cost	Annualized Benefits	Net Benefits or Net Costs*
Preferred Alternative: Final rule	Full implementation of parts 136-144	\$41.5	\$46.4	\$4.9 net benefits
Alternative 1: Parts 136-139: Inspection/TSMS only	Full implementation of parts 136-139. Removes all other requirements	\$25.4	\$4.2	(\$21.2) net costs
Alternative 2: Delayed Implementation of part 140	Full implementation of parts 136-139, parts 141-144. Delayed implementation of part 140	\$38.2	\$21.1	(\$17.1) net costs
Alternative 3: No grandfathering of certain equipment and design requirements in part 143	Full implementation of parts 136-142. No grandfathering of certain requirements in Part 143	\$82.3	\$55.9	(\$26.5) net costs

\*Net benefits do not include unquantified congestion and delay benefits.  
Totals may not add due to rounding.

The RA available in the docket includes an analysis of the costs of this rulemaking by requirement and provides an assessment of potential monetized, quantified and non-quantified benefits of this rulemaking. The RA also contains details and analysis of other alternatives considered for this rulemaking.

#### B. Small Entities

##### Overview of the Final Regulatory Flexibility Act Analysis

The Regulatory Flexibility Act (Public Law 96-354) (RFA) establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration."

The RFA and Executive Order 13272 require a review of proposed and final rules to assess their impacts on small entities. An agency must prepare an initial regulatory flexibility analysis (IRFA) unless it determines and

certifies that a rule, if promulgated, would not have a significant economic impact on a substantial number of small entities. During the NPRM stage, the Coast Guard published an IRFA to aid the public in commenting on the potential small entity impacts of the provisions in the NPRM. All interested parties were invited to submit data and information regarding the potential economic impact that would result from adoption of the proposals in the NPRM.

When an agency promulgates a final rule under 5 U.S.C. 553, after being required by that section or any other law to publish a general NPRM, or promulgates a final interpretative rule involving the internal revenue laws of the United States as described in 5 U.S.C. 603(a), the agency must prepare a final regulatory flexibility assessment (FRFA) or have the head of the agency certify pursuant to 5 U.S.C. 605(b) that the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities. The RFA also requires an agency to conduct a FRFA unless it determines and certifies that a rule is not expected to have a significant economic impact on a substantial number of small entities.

The Coast Guard did not certify that the final rule

will not have a significant economic impact on a substantial number of small entities. We received comments and data from several commenters on the IRFA, and that information was considered for the FRFA. The RFA prescribes the content of the FRFA in section 604(a), which we discuss below.

In accordance with the RFA (5 U.S.C. 601-612), the Coast Guard prepared the FRFA in the Regulatory Analysis document that examines the impacts of the final rule on small entities (5 U.S.C. 601, *et seq.*). A small entity may be:

- A small independent business, defined as any independently owned and operated business not dominant in its field that qualifies as a small business per the Small Business Act (5 U.S.C. 632);
- A small not-for-profit organization; and;
- A small governmental jurisdiction (locality with fewer than 50,000 people).

This FRFA addresses the following:

(1) A statement of the need for, and objectives of, the rule;

(2) A statement of the significant issues raised by the public comments in response to the IRFA, a statement of

the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;

(3) The response of the agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA) in response to the proposed rule, and a detailed statement of any change made to the proposed rule in the final rule as a result of the comments;

(4) A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available;

(5) A description of the projected reporting, recordkeeping and other compliance requirements of the rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;

(6) A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the

agency which affect the impact on small entities was rejected.

Below is a discussion of the FRFA for each of these six elements:

(1) A statement of the need for, and objectives of, the rule

The need for Federal regulatory action is due to the risk of potential accidents caused by towing vessels on the nation's maritime system. The consequences of towing vessel accidents can be severe, including fatalities; injuries; damage to property, infrastructure and the environment; and closure of transportation assets and subsequent delays. There is also a public demand for improvements in the management of the nation's waterways.

The casualties resulting from towing vessel accidents are examples of negative externalities that are relevant to this final rule. The cost of a higher safety standard is borne by the towing vessel owner or operator, while the cost of an accident could be distributed across various entities, including the vessel owner or operator, crew, other vessel owners or operators, federal, state, and local public service providers, businesses, and private citizens. The material failure of the private market in reaching the socially optimal outcome increases the risk to the public.



An uncompensated increase in risk currently exists due to inconsistent safety practices in the marine towing industry. Regulatory action is required to take steps to reduce risk industry-wide and thereby obtain the socially optimal outcome.

This final rule is authorized and made necessary by the 2004 Act, which made towing vessels subject to inspection. Further, the 2010 Act authorized the Secretary to issue a rule containing towing safety management system provisions promulgated under 46 U.S.C. 3306(j).

The objective of this regulatory action is to enhance the safe operations of towing vessels on our nation's waterways. The final rule seeks to fulfill this objective by including towing vessels on the list of vessels that Coast Guard must inspect, improving the working environment of towing vessel crews, and placing responsibility for the safe operation of towing vessels on the owners or operators of the vessels. The requirements of the final rule are designed to encourage companies to engage at every level to improve safe operations, maintenance and design and adhere to prescribed safety standards.

(2) A statement of the significant issues raised by the public comments in response to the initial regulatory flexibility analysis, a statement of the assessment of the

agency of such issues, and a statement of any changes made  
in the proposed rule as a result of such comments

On August 11, 2011, the Coast Guard published an NPRM titled "Inspection of Towing Vessels" in the Federal Register (76 FR 49976). The Coast Guard then held four public meetings, one each in Newport News, VA; New Orleans, LA; St. Louis, MO; and Seattle, WA. We received and considered a combined total of more than 3,000 comments, from more than 265 written submissions and oral statements from 105 persons at public meetings, in developing this final rule. We summarized these comments in the "Discussion of Comments and Changes" section of the preamble for the final rule.

We received several comments from small business owners and operators on the economic impact of subchapter M regulations. Some commenters were opposed to new regulations and did not provide specific information or data on how they will be impacted by its requirements. Many other commenters requested either exemption or grandfathering from all or some of these regulations. These commenters wanted to completely avoid or mitigate the impact of the regulations so they could continue to serve the towing vessel industry. Below is a discussion of comments received on small business impacts.

Some commenters felt that subchapter M requirements would hurt small business owners and their employees, and could put many small entities out of business. However, they did not provide specific data on how much of a burden the requirements might be on their operational costs. The most specific comment received noted that recordkeeping proposals alone would require him to hire one or more new full time workers. Some other commenters pointed to the overall costs of subchapter M regulations that were previously put in a range of \$100,000 to \$250,000, per vessel, and potentially several million dollars per company for business entities that owned multiple towing vessels.

Several other commenters, similar to the previous group of commenters also expressed concern that their company would not be able to pay for these requirements, and therefore, either be forced out of business or be acquired by larger entities in the towing vessel industry. Due to these costly subchapter M regulations one commenter argued that lenders would delay lending and review existing ship mortgages to reassess their collateral positions. This commenter noted that this is because many small towing vessel owners and operators could not afford to comply with the requirements of the regulations. Another commenter stated that his company would lose the ability to borrow

against their boats if they can't comply with the proposed regulations. One commenter estimated that no less than 20 percent of the aggregate U.S. towing fleet would be put out of service, if the final rule goes into effect as written in the NPRM.

The Coast Guard appreciates these comments on the economic impact of the final rule on small entities. Cognizant of regulatory impacts on small entities, the Coast Guard sought to minimize these impacts and has structured the final rule with this end in mind. The Coast Guard's efforts to minimize the cost impacts on small entities in the final rule include the following.

- Inspection compliance options: the Coast Guard has retained from the proposed rule flexibility in the method for complying with inspections, either through Coast Guard inspections or a TSMS. Some commenters suggested that a TSMS be mandatory for all towing owners and operators and their vessels. However, the Coast Guard has instead continued to allow either option, so that small entities can chose the approach that minimizes impacts on their particular business operations.

- Automatic External Defibrillator (AED): The Coast Guard has removed the requirement for towing vessels to have AEDs to reduce the cost impact of the final rule.

The savings resulting from this change would be estimated at \$2,500 per unit for each vessel.

- **Pilothouse alerters:** The Coast Guard has retained the requirement for pilothouse alerters, but has limited applicability to larger towing vessels (in excess of 65 ft) with potentially higher risk profiles. To reduce the burden of this requirement, the Coast Guard has also allowed for a longer implementation period. For vessels less than 65 feet, the savings are the \$5,410 cost of the alerter per vessel.

- **Equivalence of existing SMSs:** For owners and operators that choose the TSMS option, the Coast Guard has sought to minimize additional effort to develop and implement a TSMS by establishing a process for granting equivalency between an existing SMS and a TSMS. Also, under the final rule, compliance with ISM is equivalent to a TSMS. This change has the potential to minimize efforts for the 51 percent of the affected population covered by an existing SMS, but the amount of the savings has not been quantified.

- **Removing certain requirements for existing vessels:** In response to comments received on the NPRM, the Coast Guard has removed certain requirements in parts 143 and 144 for existing vessels to decrease the cost. In the

NPRM, the Coast Guard estimated that certain requirements could cost in the range of \$5,000 to \$20,000 per requirement per vessel, at a total of approximately \$60,000 per vessel. Commenters provided estimates at or exceeding \$100,000 to \$150,000 to retrofit vessels to meet these requirements.

- **Stability documents:** The Coast Guard has changed certain requirements in part 144 to offer additional methods for compliance. One commenter estimated that it could cost tens of thousands of dollars to have a naval architect generate stability calculations under the NPRM proposal. Section 144.300(b) now offers three options for an existing vessel without a stability document to meet part 144 requirements: findings based on the vessel's operation or a history of satisfactory service, successful performance on operational tests, or a satisfactory stability assessment. In particular, allowing for a vessel's history of satisfactory service in the final rule provides a lower cost method for compliance, which should serve to reduce the cost on small entities.

(3) The response of the agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration in response to the proposed rule, and a detailed statement of any change made to the proposed rule

in the final rule as a result of the comments

The Coast Guard did not receive any comments from the SBA's Office of Advocacy regarding the impact that the proposed rule would have on small entities.

(4) A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available

The final rule will affect the owners and operators of certain towing vessels. We constructed a towing vessel fleet database based on data from the Waterborne Transportation Lines of the U.S., U.S. Army Corps of Engineers; the Inland River Record, Waterways Journal; the Coast Guard's MISLE system; web sites and other public sources. From this database we identified 5,509 vessels affected by this rule. There are 1,096 companies that own or operate these vessels.

We used available operator name and address information to research public and proprietary databases for entity type (subsidiary or parent company), primary line of business, employee size, revenue, and other information. We found 20 vessels owned by 17 governments and 6 owned by non-profits. The remainder are business entities. For governmental jurisdictions, we determined whether the jurisdiction had populations of less than

50,000 as per the criteria in the RFA. For nonprofits, we qualitatively evaluated whether the nonprofit was independently owned and operated and is not dominant in its field. For the businesses, we matched the owner information to the SBA's "Table of Small Business Size Standards" to determine if an entity is small in its primary line of business as classified in the North American Industry Classification System (NAICS). Of the 20 vessels owned by 13 governments, 5 are owned by small government jurisdictions (with fewer than 50,000 people). Of the 6 vessels owned by 3 non-profits, all are owned by non-profits that are independently operated and not dominant in their field.

There are a total of 26 NAICS-coded industries in the final rule's affected population and we show below the 11 industries that appeared most frequently in the affected population of owners or operators of towing vessels.



Table 17: Eleven Most Frequent Industries Affected by the Final Rule

NAICS Code	Description	Small Entity Definition	Count of Towing Vessel Entities in Each NAICS Code	Percent of Total Number of Towing Vessel Entities
483211	Inland Water Freight Transportation	< 500 Employees	71	31.8%
488330	Navigational Services To Shipping	< \$38,500,000	48	21.5%
483113	Coastal and Great Lakes Freight Transportation	< 500 Employees	42	18.8%
238910	Site Preparation Contractors	< \$14,000,000	13	5.8%
483111	Deep Sea Freight Transportation	< 500 Employees	10	4.5%
213112	Support Activities For Oil & Gas Operations	< \$35,500,000	5	2.2%
237310	Highway Street & Bridge Construction	< \$33,500,000	4	1.8%
336611	Ship Building & Repairing	< 1,000 Employees	4	1.8%
423320	Brick, Stone/Related Construction	< 100 Employees	4	1.8%

	Material Merchant Wholesalers			
444190	Other Building Material Dealers	< \$19,000,000	3	1.3%
488320	Marine Cargo Handling	< \$38,500,000	3	1.3%

We randomly selected a sample size of the 5,509 towing vessels to reach the 95 percent confidence level. This sample produced a set of 223 businesses that own and operate the towing vessels. No governments or non-profits were in our sample. Of the 223 businesses, there were 43 companies that exceeded SBA small business size standards, 113 companies considered small by the SBA, and 67 companies for which no information was available. For the purposes of this analysis, we consider all entities for which information was not available to be small. Thus, there are 180 businesses in our sample we consider to be small entities.

#### Cost Methodology—Analysis Periods, Variable Costs, and Fixed Costs

The cost incurred by a particular small entity over the 10-year period of analysis varies based on the period of years in question. For the purposes of this FRFA, we analyzed the cost impacts on small entities for a representative year within two periods, as the phase-in period of the initial two years and the full implementation period from Years 3 through 10 have unique costs. During the phase-in period, companies will face initial implementation costs, such as the TSMS and conducting

initial vessel surveys. Over the following full implementation period, companies will face ongoing costs associated with periodic surveys, vessels will operate under their COIs and companies will face ongoing costs associated with obtaining and renewing COIs, periodic surveys and audits, drydock inspections, and Coast Guard inspections. The scheduling of all these activities are dependent on a number of factors, such as the following:

- A vessel operating under the TSMS option will be subject to management and vessel audits and the operating company will need to obtain a TSMS Certificate.
- Many of the requirements are based on when a vessel obtains its first COI, which lasts for five years. The rule states that vessel owners/operators must spread out the initial COI over two-to-four years, depending on the size of the fleet.
- A vessel operating in salt water must have two drydock inspections in every 5-year period, while one operating in fresh water only needs one.

We anticipate that the entities will manage the compliance activities so that costs are efficiently managed. For example, an owner with vessels operating

under the TSMS options having a fleet of vessels in the upper Mississippi River may want to have the Coast Guard inspect all vessels at one time during the winter when that stretch of the River is closed and the vessels are idle. As a counter example, an entity with a fleet in constant operation may want to spread the Coast Guard inspections over the five-year period to minimize disruptions to service. Thus, there is no one year in the full implementation period that contains all the cost elements for all vessels. To provide a single reference year we constructed a hypothetical "heavy load" year that contains all the requirements for a vessel and an entity. This year includes a COI renewal for a TSMS vessel, the Coast Guard inspection, and a drydock inspection and other costs that apply throughout this period. As described below, the construct of the "heavy load year" enabled the comparison of the costs for one year to revenue for one year.

To conduct the small entity revenue impact analysis we divided the total annual costs of an entity for the two periods into these three components: vessel annual variable costs, vessel annual fixed costs, and unit annual entity costs. Vessel annual variable costs are those that are dependent upon the characteristics or condition of the vessel. Vessel annual fixed costs are those that apply to

all vessels, such as the requirement to post the COI. Unit annual entity costs are those that accrue at the management level of the entity. The annual costs for an entity are calculated for the phase-in and full implementation periods using the following equations:

Equation 1: Vessel Annual Unit Cost = Vessel Annual Variable Cost + Vessel Annual Fixed Cost

Equation 2: Total Annual Vessel Costs = Vessel Annual Unit Cost (eq. 1) \* number of vessels

Equation 3: Total Entity Costs = Total Annual Vessel Costs (eq. 2) + Unit Annual Entity Costs

Vessel annual fixed costs and unit annual entity costs are derived for the phase-in and full-implementation periods from data in the cost model from the regulatory analysis. The fixed costs for the phase-in period are the same in both years. For the full-implementation period we used the costs associated with the hypothetical "heavy load" year, described above. Table 18 shows these costs for the two periods.

Table 18:  
Annual Vessel Fixed Costs and Unit Entity Costs for  
Phase-In and Full-Implementation Periods

Period	Annual Vessel Fixed Cost	Annual Entity Unit Cost
Phase-In	\$11,480	\$23,737
Full	\$5,045	\$5,250

Implementation		
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In the regulatory analysis, we used MISLE deficiency data to estimate the number of vessels that would need to make changes to comply with various system or equipment standards. This generated population based estimates, but did not identify the specific vessels that would incur these compliance costs.

To estimate vessel variable costs, we adopted the Monte Carlo methodology used in the IRFA. We used the Monte Carlo as a tool to resolve the uncertainties related to which vessels will need to comply with which requirements, each with their own unit costs and affected populations. The Monte Carlo model we developed accounts for the ranges of unit costs and affected populations across the requirements by taking as inputs the specific unit costs and affected populations for each requirement. The output of the model is a distribution of total variable costs.

The Monte Carlo model simulated a one-year variable costs for the phase-in and full-implementation periods separately. The inputs are from the cost estimates of each requirement: the affected population recast as a

percentage of the total vessel population, and the unit costs. Each simulation was run 10,000 times to produce a distribution of costs. For a point estimate of the vessel annual variable costs we took the average value of each distribution, which yielded \$4,787 for the phase-in period and \$9,866 for the full implementation period.

To summarize from the presentations above, the parameters for the phase-in period are the following:

Vessel Annual Variable Cost = \$4,787

Vessel Annual Fixed Cost = \$11,480

Entity Annual UnitCost = \$5,045.

Applying Equation 1 from above, Vessel Annual Unit Cost = \$16,267 (Vessel Annual Variable Cost, \$4,787, + Vessel Annual Fixed Cost, \$11,480).

The variable inputs are the number of vessels operated by each entity, which is found in the Affected Population Database, and the entity's revenue.

We developed an annual revenue impact analysis for the average company in our sample. The average number of vessels per company in our sample is 1.7, so the two-vessel example is representative of an average company. We estimate this average two-vessel owning small entity will



incur an annual cost of \$37,579 during the two-year phase-in period of this rule. Consequently, the total two-year implementation cost for the average small entity is estimated at \$75,158. The average annual revenue across the sample is \$10,058,187. With these inputs we derived an estimate of the annual revenue impact for the average entity in the sample. The results of this analysis are shown as Example 1 in Table 19. Examples 2 through 4 show the calculations for examples of applying Equations 2 and 3 for three hypothetical companies, with one-, three-, and four- vessel fleets, respectively.

Table 19:  
Examples of Annual Revenue Impact Calculations During the  
Phase-In Period

For the Average-Size Fleet (2 vessels) and Hypothetical Examples for 1-, 3-, and 4-  
Vessel Fleets

(Revenue for Example 2 is sample average, others are hypothetical)

(A) Entity Name	(B) Fleet Size	(C) Vessel Annual Unit Cost	(D) Vessel Annual Cost (B * C)	(E) Entity Annual Unit Cost	(F) Total Annual Cost (D + E)	(G) Annual Revenue	(H) Annual Revenue Impact (F / G)
Example 1 (Average Entity)	2	\$16,267	\$32,534	\$5,045	\$37,579	\$10,058,187	0.40%
Hypothetical Examples							
Example 2	1	\$16,267	\$16,267	\$5,045	\$21,312	\$5,000,000	0.43%
Example 3	3	\$16,267	\$48,801	\$5,045	\$53,846	\$15,000,000	0.36%
Example 4	4	\$16,267	\$65,068	\$5,045	\$70,113	\$20,000,000	0.35%

:

For the 92 businesses with revenue data, we calculated the total costs for each small entity and a revenue impact as a percentage of revenue. Table 21 presents the annual revenue impact on small entities for the phase-in and full implementation periods.

Table 21: Percentage of Estimated Annual Revenue Impact on Affected Small Entities

	Annual Impacts from phase-in costs (average of Years 1-2)		Annual Impacts from Implementation Costs ("heavy load" year)	
Revenue Impact Range	Number of Entities	Percent of Entities	Number of Entities	Percent of Entities
0% <= 1%	60	65.2	44	47.8
1% <= 3%	19	20.7	27	29.3
3% <= 5%	2	2.2	8	8.7
5% <= 10%	5	5.4	2	2.2
Above 10%	6	6.5	11	12.0
Total	92	100.0	92	100.0

During the phase-in period, for the average cost per year, our analysis indicates that nearly 65 percent of the

small entities will have an annual revenue impact of 1% or less. Approximately 28.3 percent of the small entities will have an annual revenue impact of between 3 percent and 10 percent. The remaining 6.5 percent of the small entities will have an annual revenue impact of over 10 percent.

After full implementation of inspections and COIs, we estimate that 47.8 percent of the small entities will have an annual revenue impact of 1% or less. Approximately 40.2 percent of the small entities will have an annual revenue impact of between 3 percent and 10 percent. The remaining 12.0 percent of the small entities will have an annual revenue impact of over 10 percent.

(5) A description of the projected reporting, recordkeeping and other compliance requirements of the rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record

Under the provisions of the final rule, 5,509 towing vessels owned by 1,096 towing vessel companies will be required to conduct a variety of reporting and recordkeeping activities, related to obtaining and renewing a COI, which will involve compiling information,

submission, and third part review. Additionally, information will be collected at the vessel and company level regarding safety, operations, drills, record keeping, and general compliance. These requirements will be added as a new collection of information with the OMB control number 1625-0117 with the title "Towing Vessels - Title 46 CFR Subchapter M. Please refer to Chapter 11, "Paperwork Reduction Act", the Regulatory Analysis for further detail.

(6) A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected

Prior to this rulemaking, the Coast Guard participated in the TSAC meetings that helped formulate our proposals in the NPRM. Small entities had the opportunity to participate in this Committee and the Economic Analysis Working Group.

The Coast Guard has made a number of changes from the proposals in the NPRM after consideration of public comments. A full discussion of comments and Coast Guard

responses is found in the "Discussion of Comments and Changes" section above. In developing both the original proposal and the final rule, the following are examples of the Coast Guard's efforts to minimize the economic impact on small entities.

Inspection compliance options: the Coast Guard has retained from the proposal the choice of method for complying with inspections, either through Coast Guard inspections or a TSMS. Some commenters suggested that a TSMS be mandatory for all towing owners and operators and their vessels. However, the Coast Guard has instead continued to allow either option, so that small entities can choose the approach that minimizes impacts on their particular business operations.

AED: The Coast Guard has removed the requirement for towing vessels to have AEDs to reduce the cost impact of the final rule.

Pilothouse alerters: The Coast Guard has retained the requirement for pilothouse alerters, but has limited applicability to larger towing vessels (in excess of 65 ft) with potentially higher risk profiles. To reduce burden of this requirement the Coast Guard has also allowed for a longer implementation period.

Equivalence of existing SMSs: For owners and operators that chose the TSMS option, Coast Guard has sought to minimize effort to develop and implement a TSMS by establishing a process for granting equivalency between an existing SMS and a TSMS. Also, under the final rule, compliance with ISM is equivalent to a TSMS.

Removing certain requirements for existing vessels: In response to comments received on the NPRM, the Coast Guard has removed certain requirements in parts 143 and 144 for existing vessels to decrease the cost.

Stability documents: The Coast Guard has changed certain requirements in part 144 to offer additional methods for compliance. Section 144.300(b) now offers three options for an existing vessel without a stability document to meet part 144 requirements: findings based on the vessel's operation or a history of satisfactory service, successful performance on operational tests, or a satisfactory stability assessment. In particular, allowing for a vessel's history of satisfactory service in the final rule provides a lower cost method for compliance, which should serve of compliance to reduce the cost on small entities.

The Coast Guard discusses the full range of alternatives considered in Section 6 of the RA. We

monetized the impacts of three alternatives. Table 13 above summarizes the costs, benefits and net benefits of the alternatives considered and the preferred alternative adopted in the final rule.

Alternative 1 estimates impacts of only implementing the inspection requirements of the final rule, without the operational, lifesaving, fire protection, machinery and electrical, and construction and arrangement requirements. Although this approach reduces the cost impacts of the final rule, the benefits fall by almost 85 percent. The annualized net impact of the rule (benefits minus costs) falls from \$4.5 million in net benefits for the preferred alternative to a net cost of \$21.2 million. Requiring only the inspection requirements without also increasing the standards in the other CFR parts fails to meet the objective of improving towing vessel safety and decreasing the risk of towing vessel accidents to a substantive degree. The Coast Guard developed and chose the comprehensive approach that combines an inspection regime with improved standards as it results in the greater societal outcomes, as demonstrated by the net benefits.

Similarly, Alternative 2, which estimates the impact of delaying implementation of the operational standards found in Part 140, also results in lower annualized net



impacts: \$4.5 million net benefits for the preferred alternative and \$17.1 million net costs for Alternative 2. The Coast Guard chose not to delay implementation of the operational standards in part 140 as it results in the greater societal outcomes, as demonstrated by the net benefits.

Alternative 3 analyzes the impacts of not removing certain requirements in parts 143 and 144 (as discussed above). Alternative 3 has a greater cost burden, including greater impact on small entities, than the preferred alternative and results in net costs of \$26.4 million. For these reasons, the Coast Guard has applied the certain requirements in parts 143 and 144 to only new vessels and reduced the burden on small entities.

We are interested in the potential impacts from this final rule on small businesses and we request public comment on these potential impacts.

#### C. Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Public Law 104-121), we want to assist small entities in understanding this final rule so that they can better evaluate its effects on them and participate in the rulemaking. As noted, we have prepared a Small Entities Guide for this rule and have

placed in it the docket for this rulemaking. If the final rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please consult LCDR Will Nabach, Project Manager, CG-OES-2, Coast Guard, telephone 202-372-1386. The Coast Guard will not retaliate against small entities that question or complain about this rule or any policy or action of the Coast Guard.

Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1-888-REG-FAIR (1-888-734-3247).

#### D. Collection of Information

This final rule would call for a collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520). As defined in 5 CFR 1320.3(c), "Collection of Information" comprises reporting, recordkeeping, monitoring, posting, labeling, and other, similar actions. The title and description of the

information collections, a description of those who must collect the information, and an estimate of the total annual burden follow. The estimate covers the time for reviewing instructions, searching existing sources of data, gathering and maintaining the data needed, and completing and reviewing the collection.

TITLE: Towing Vessels - Title 46 CFR Subchapter M.

SUMMARY OF THE COLLECTION OF INFORMATION: Owners and managing operators of inspected towing vessels would be required to either develop and maintain documentation for their safety management system and arrange periodic audits and surveys through third-party organizations, or to demonstrate compliance with the subchapter M to Coast Guard inspectors. Additional documentation would be required to obtain a Certificate of Inspection for each vessel, comply with crew and vessel operational safety standards, vessel equipment and system standards, procedures and schedules for routine tests and inspections of towing vessels and their onboard equipment and systems. The new requirements for third-party auditors and surveyors include obtaining Coast Guard approval and renewing it periodically. The Coast Guard would be burdened by reviewing required reports, conducting compliance examinations of towing

vessels and overseeing third-party auditors and surveyors through approval and observation.

NEED FOR INFORMATION: The information is necessary for the proper administration and enforcement of the towing vessel inspection program.

PROPOSED USE OF INFORMATION: The Coast Guard would use this information to document that towing vessels meet inspection requirements of subchapter M.

DESCRIPTION OF THE RESPONDENTS: The respondents are the owners and managing operators of towing vessels and third-party auditors and surveyors that would be required to complete various forms, reports and keep reports.

NUMBER OF RESPONDENTS: The 5,694 respondents are the owners and operators of 5,509 affected towing vessels and 185 entities that employ the third-party auditors and surveyors.

FREQUENCY OF RESPONSE: The average responses per year are 7,660,257.

ESTIMATE OF TOTAL ANNUAL BURDEN: The total annual burden is 181,669 hours.

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), we have submitted a copy of this rule to the Office of Management and Budget (OMB) for its review of the collection of information.

You need not respond to a collection of information unless it displays a currently valid control number from OMB. Before the Coast Guard could enforce the collection of information requirements in this rule, OMB would need to approve the Coast Guard's request to collect this information.

#### E. Federalism

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. We have analyzed this rule under that order and have determined that it is consistent with the fundamental federalism principles and preemption requirements described in E.O. 13132. Our analysis is explained below.

It is well settled that States may not regulate in categories reserved for regulation by the Coast Guard. It is also well settled that all of the categories covered in 46 U.S.C. 3306, 3703, 7101, and 8101 (design, construction, alteration, repair, maintenance, operation, equipping, personnel qualification, and manning of vessels), as well as the reporting of casualties and any other category in

which Congress intended the Coast Guard to be the sole source of a vessel's obligations, are within the field foreclosed from regulation by the States. (See the decision of the Supreme Court in the consolidated cases of United States v. Locke and Intertanko v. Locke, 529 U.S. 89, 120 S.Ct. 1135 (March 6, 2000).) This rule covers all of the foreclosed categories, as it establishes regulations covering a new category of inspected vessels, as mandated by Congress. Because the States are now foreclosed from regulating towing vessels in these categories, the rule is consistent with the principles of federalism and preemption requirements in Executive Order 13132.

#### F. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995, 2 U.S.C. 1531-1538, requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of \$100,000,000 (adjusted for inflation) or more in any one year. Though this rule will not result in such an expenditure, we do discuss the effects of this rule elsewhere in this preamble.

#### G. Taking of Private Property

This rule will not cause a taking of private property or otherwise have taking implications under E.O. 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

#### H. Civil Justice Reform

This rule meets applicable standards in sections 3(a) and 3(b)(2) of E.O. 12988 ("Civil Justice Reform"), to minimize litigation, eliminate ambiguity, and reduce burden.

#### I. Protection of Children

We have analyzed this rule under E.O. 13045 ("Protection of Children from Environmental Health Risks and Safety Risks"). This rule is not an economically significant rule and would not create an environmental risk to health or risk to safety that might disproportionately affect children.

#### J. Indian Tribal Governments

This rule does not have tribal implications under E.O. 13175 ("Consultation and Coordination with Indian Tribal Governments"), because it would not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and

responsibilities between the Federal Government and Indian tribes.

K. Energy Effects

We have analyzed this rule under E.O. 13211 ("Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use"). We have determined that it is not a "significant energy action" under E.O. 13211, because although it is a "significant regulatory action" under E. O. 12866, it is not likely to have a significant adverse effect on the supply, distribution, or use of energy, and the Administrator of OMB's Office of Information and Regulatory Affairs has not designated it as a significant energy action.

L. Technical Standards and 1 CFR part 51

The National Technology Transfer and Advancement Act, codified as a note to 15 U.S.C. 272, directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through OMB, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are



developed or adopted by voluntary consensus standards bodies.

This final rule uses the following voluntary consensus standards from:

The American Boat and Yacht Council (ABYC) --

- ABYC E-11 (2003), AC and DC Electrical Systems on Boats. This standard covers the design, construction, and installation of direct current (DC) electrical systems on boats and of alternating current (AC) electrical systems on boats.
- ABYC H-2 (2000), Ventilation of Boats Using Gasoline. This standard covers the design, construction, and installation of ventilation systems of engine and fuel tank compartments of boats using gasoline for mechanical power, propulsion, or auxiliary generators.
- ABYC H-22 (2005), Electric Bilge Pump Systems. This standard covers the design, construction, installation, operation, and control of electric bilge pump systems on boats.
- ABYC H-24 (2007), Gasoline Fuel Systems. This standard covers the design, choice of materials for, construction, installation, repair, and maintenance of permanently installed gasoline fuel systems on boats."
- ABYC H-25 (2003), Portable Gasoline Fuel Systems. This standard covers the design, construction and stowage of portable tanks with related fuel lines and accessories comprising a portable gas fuel system for boats.
- ABYC H-32 (2004), Ventilation of Boats Using Diesel Fuel. This standard covers the design, construction, and installation of ventilation systems of boats using diesel fuel only for electrical generation, mechanical power, and propulsion.
- ABYC H-33 (2005), Diesel Fuel Systems. This standard covers the design, choice of materials, construction, installation, repair, and maintenance of permanently installed diesel fuel systems on boats.

- ABYC P-1 (2002), Installation of Exhaust Systems for Propulsion and Auxiliary Engines. This standard covers the design, installation and selection of materials for exhaust systems for marine engines of boats.
- ABYC P-4 (2004), Marine Inboard Engines and Transmissions. This standard covers the design, construction, installation, and selection of materials for inboard engines and transmissions on boats.

#### The American Bureau of Shipping (ABS) --

- ABS Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways, 2007. These standards are for barges, towboats, cargo vessels and passenger vessels in service on major rivers and on connecting intracoastal waterways. They are applicable to those features that are permanent in nature and can be verified by plan review, calculation, physical survey or other appropriate means.
- ABS Rules for Building and Classing Steel Vessels Under 90 Meters (295 Feet) in Length, 2006. These standards are applicable to self-propelled steel vessels under 90 meters (295 feet) in length intended for unrestricted ocean service, except where specifically mentioned otherwise.

#### The American Society for Quality (ASQ), Quality Press --

- ANSI/ISO/ASQ Q9001-2000, American National Standard: Quality management systems - Requirements. This standard specifies requirements for an organization's quality management system.

#### FM Approvals --

- FM 6050-1996, Approval Standard for Storage Cabinets (Flammable and Combustible Liquids). This standard contains performance and construction requirements for cabinets designed to provide safe and secure storage for flammable and combustible liquids.

#### The International Maritime Organization (IMO) --

- Resolution A.520(13), Code of Practice for the Evaluation, Testing and Acceptance of Prototype Novel Life-saving Appliances and Arrangements, November 17, 1983. This code prescribes the appliance and arrangement criteria which should be taken into account and prototype tests which should be carried out for the evaluation of novel designs for international acceptance.  
Resolution A.658(16), Use and Fitting of Retro-Reflective Materials on Life-saving Appliances, October 19, 1989. This resolution details the requirements for use, fitting, and size/type of retro-reflective materials on life-saving appliances.
- Resolution A.688(17), Fire Test Procedures For Ignitability of Bedding Components, 1991. This resolution details the fire test procedures to determine the ignitability of bedding components.
- Resolution A.760(18), Symbols Related to Life-Saving Appliances and Arrangements, November 4, 1993. This resolution details the requirements for symbols related to life-saving appliances and arrangements.
- International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended. This international convention is designed to improve the safety of shipping.

The International Organization for Standardization (ISO) --

- ISO 9001-2008(E), International Standard: Quality management systems - Requirements, Fourth edition, dated November 15, 2008. This international standard details the requirements for quality management systems.
- ISO 14726-2008(E), International Standard: Ships and marine technology-Identification colours for the content of piping systems, First edition, dated May 1, 2008. This international standard specifies main colors and additional colors for identifying piping systems in accordance with the content or function on board ships and marine structures.

The National Fire Protection Association (NFPA) --

- NFPA 10, Standard for Portable Fire Extinguishers, 2007 Edition, effective August 17, 2006. The

provisions of this standard apply to the selection, installation, inspection, maintenance, and testing of portable extinguishing equipment.

- NFPA 70, National Electrical Code (NEC), 2002 Edition, effective August 2, 2001. The provisions of this standard apply to the design, modification, construction, inspection, maintenance, and testing of electrical systems/installations and equipment.
- NFPA 302, Fire Protection Standard for Pleasure and Commercial Motor Craft, 1998 Edition. This standard specifies provisions for fire protection on pleasure and commercial motor craft.
- NFPA 306, Standard for the Control of Gas Hazards on Vessels, 2014 Edition, effective June 17, 2013. This standard describes the conditions required before a space can be entered or work can be started, continued, or started and continued on any vessel under construction, alteration, or repair, or on any vessel awaiting shipbreaking.
- NFPA 750, Standard on Water Mist Fire Protection Systems, 2006 Edition, effective February 16, 2006. This standard contains the minimum requirements for the design, installation, maintenance, and testing of water mist fire protection systems.
- NFPA 1971, Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, 2007 Edition, effective August 17, 2006. This standard specifies the minimum design, performance, testing, and certification requirements for certain types of fire fighting protective ensembles and ensemble elements that include coats, trousers, coveralls, helmets, gloves, footwear, and interface components.

#### The Society of Automotive Engineers (SAE) --

- ANSI/SAE Z 26.1-1996, American National Standard for Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways - Safety Standard. This standard provides specifications and methods of testing for safety glazing material used for windshields, windows, and partitions of land and marine vehicles and aircraft.
- SAE J1475-Revised JUN96 - Hydraulic Hose Fitting for Marine Applications, revised June 1996. This standard covers general and performance

specifications for certain hydraulic hose fittings used in conjunction with nonmetallic flexible hoses for marine applications.

- SAE J1942-Revised APR2007 - Hose and Hose Assemblies for Marine Applications, revised April 2007. This standard covers specific requirements for several styles of hose and/or hose assemblies in systems on board commercial vessels inspected and certificated by the U.S. Coast Guard.

UL (formerly Underwriters Laboratories, Inc.) --

- UL 217, Standard for Safety for Single and Multiple Station Smoke Alarms, Sixth Edition, dated August 25, 2006. Along with other types of smoke alarms used in different settings, this standard specifies requirements for smoke alarms intended for use in recreational boats.
- UL 1104, Standard for Safety for Marine Navigation Lights, Second Edition, dated October 29, 1998. These requirements cover marine navigation light fixtures intended for use in accordance with the applicable U. S. Coast Guard regulations.
- UL 1275, Standard for Safety for Flammable Liquid Storage Cabinets, Third Edition, dated June 30, 2005. These requirements cover cabinets intended to be used to provide an indoor storage area for limited quantities of flammable and combustible liquids in containers in compliance with specified standards.

Consistent with 1 CFR part 51 incorporation-by-reference provisions, this material is reasonably available. Interested persons have access to it through their normal course of business, may purchase it from sources listed in 46 CFR 136.112, or may view a copy by the means we have identified in the ADDRESSES section. Section 136.112 also identifies the sections that reference these standards.

#### M. Environment

We have analyzed this final rule under Department of Homeland Security Management Directive 023-01 and Commandant Instruction M16475.1D, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969, 42 U.S.C. 4321-4370f, and have concluded that this action is one of a category of actions that do not individually or cumulatively have a significant effect on the human environment. A final environmental analysis checklist and categorical exclusion determination supporting this determination are available in the docket where indicated under the "Addresses" section of this preamble. This final rule involves regulations that are procedural; regulations concerning the training of maritime personnel; regulations concerning manning, documentation, inspection and equipping of vessels; regulations concerning equipment approval and carriage requirements; regulations concerning vessel operation safety standards; and Congressionally mandated regulations designed to improve or protect the environment. This action falls under section 2.B.2, figure 2-1, paragraphs (34)(a), (c), (d), and (e) of the Commandant Instruction M16475.1D, and under section 6(a) and (b) of the "Appendix to National Environmental Policy Act: Coast Guard Procedures for Categorical

Exclusions, Notice of Final Agency Policy" (67 FR 48243, July 23, 2002).

### List of Subjects

#### 46 CFR Part 1

Administrative practice and procedure, Organization and functions (Government agencies), Reporting and recordkeeping requirements.

#### 46 CFR Part 2

Marine safety, Reporting and recordkeeping requirements, Vessels.

#### 46 CFR Part 15

Reporting and recordkeeping requirements, Seamen, Vessels.

#### 46 CFR Part 136

Incorporation by reference, Reporting and recordkeeping requirements, Towing vessels.

#### 46 CFR Part 137

Marine safety, Reporting and recordkeeping requirements, Towing vessels.

#### 46 CFR Part 138

Incorporation by reference, Marine safety, Reporting and recordkeeping requirements, Towing vessels.

#### 46 CFR Part 139

Incorporation by reference, Reporting and recordkeeping requirements, Towing vessels.

#### 46 CFR Part 140

Incorporation by reference, Marine safety, Occupational health and safety, Penalties, Reporting and recordkeeping requirements, Towing vessels.

#### 46 CFR Part 141

Incorporation by reference, Marine safety, Occupational health and safety, Reporting and recordkeeping requirements, Towing vessels.

#### 46 CFR Part 142

Fire prevention, Incorporation by reference, Marine safety, Reporting and recordkeeping requirements, Towing vessels.

#### 46 CFR Part 143

Hazardous materials transportation, Incorporation by reference, Marine safety, Reporting and recordkeeping requirements, Towing vessels.

#### 46 CFR Part 144

Cargo vessels, Incorporation by reference, Marine safety, Oil and gas exploration, Passenger vessels, Reporting and recordkeeping requirements, Towing vessels.

#### 46 CFR Part 199

Cargo vessels, Marine safety, Oil and gas exploration, Passenger vessels, Reporting and recordkeeping requirements.

For the reasons discussed in the preamble, the Coast Guard amends 46 CFR parts 1, 2, 15, and 199 and adds 46 CFR subchapter M, consisting of parts 136, 137, 138, 139, 140, 141, 142, 143, and 144 as follows:

#### 46 CFR CHAPTER I

#### PART 1—ORGANIZATION, GENERAL COURSE AND METHODS GOVERNING MARINE SAFETY FUNCTIONS



1. The authority citation for part 1 is revised to read as follows:

Authority: 5 U.S.C. 552; 14 U.S.C. 633; 46 U.S.C. 7701; 46 U.S.C. Chapter 93; Secs. 101, 888, and 1512, Pub. L. 107-296, 116 Stat. 2135; Department of Homeland Security Delegation No. 0170.1; § 1.01-35 also issued under the authority of 44 U.S.C. 3507; and § 1.03-55 also issued under the authority of 46 U.S.C. 3306(j).

2. Add § 1.03-55 to read as follows:

§ 1.03-55 Appeals from decisions or actions under subchapter M of this chapter.

(a) Any person directly affected by a decision or action by a classification society or a third-party organization performing a survey under subchapter M of this chapter may, after requesting reconsideration of the decision or action by the classification society or third-party organization, make a formal appeal to the cognizant OCMI.

(b) Any person directly affected by a decision or action by a classification society or a third-party organization performing an audit under subchapter M of this chapter may, after requesting reconsideration of the decision or action by the classification society or third-party organization, make a formal appeal to the District Commander of the district in which the audit was performed.

(c) Any third-party organization or person from a third-party organization directly affected by a decision or action of the Coast Guard Towing Vessel National Center of Expertise (TVNCOE) may submit a formal appeal to Commandant (CG-CVC) for appeals of decisions by the TVNCOE related to subchapter M of this chapter.

(d) Any person directly affected by a decision or action by an OCMI or District Commander may make a formal appeal pursuant to § 1.03-20 or § 1.03-25, respectively.

#### PART 2—VESSEL INSPECTIONS

3. The authority citation for part 2 continues to read as follows:

Authority: Sec. 622, Pub. L. 111-281; 33 U.S.C. 1903; 43 U.S.C. 1333; 46 U.S.C. 2103, 2110, 3306, 3703; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277, sec. 1-105; Department of Homeland Security Delegation No. 0170.1(II) (77), (90), (92) (a), (92) (b).

4. Amend § 2.01-7 as follows:

a. In paragraph (a) introductory text, before the word "as", add the word "either"; and remove the colon, and add, in its place, the words "or, if the vessel is a towing vessel, as provided in paragraph (b) of this section.";

b. Redesignate paragraph (b) as paragraph (c);

c. Add new paragraph (b) and paragraph (c) (7) to newly redesignated paragraph (c).

The addition reads as follows:

§ 2.01-7 Classes of vessels (including motorboats)  
examined or inspected and certificated.

\* \* \* \* \*

(b)(1) A U.S.-flag towing vessel is subject to inspection and certifying regulations in subchapter M of this chapter except:

(i) A vessel less than 26 feet (7.92 meters) in length measured from end to end over the deck (excluding the sheer), unless that vessel is pushing, pulling, or hauling a barge that is carrying oil or hazardous material in bulk;

(ii) A vessel engaged in one or more of the following:

(A) Assistance towing as defined in § 136.110 of this chapter;

(B) Towing recreational vessels for salvage; or

(C) Transporting or assisting the navigation of recreational vessels within and between marinas and marina facilities, within a limited geographic area, as determined by the local Captain of the Port;

(iii) A workboat operating exclusively within a worksite and performing intermittent towing within the worksite;

(iv) A seagoing towing vessel of 300 gross tons or more subject to the provisions of subchapter I of this chapter;

(v) A vessel inspected under other subchapters of this chapter that may perform occasional towing;

(vi) A public vessel as defined in 46 U.S.C. 2101;

(vii) A vessel which has surrendered its Certificate of Inspection and is laid up, dismantled, or otherwise out of service; and

(viii) A propulsion unit used for the purpose of propelling or controlling the direction of a barge where the unit is controlled from the barge, is not normally manned, and is not utilized as an independent vessel.

(2) A towing vessel not subject to subchapter M of this chapter should refer to table 2.01-7 of this section.

(c) \* \* \*

(7) For towing vessels, see part 136 of subchapter M of this chapter.

§ 2.10-25 [Amended]

5. In § 2.10-25, in the definition of "Sea-going towing vessel", after the second occurrence of the word "alongside", add the phrase ", that has been issued a Certificate of Inspection under the provisions of subchapter I of this chapter".

Part 15-MANNING REQUIREMENTS

6. The authority citation for part 15 is revised to read as follows:

Authority: 46 U.S.C. 2101, 2103, 3306, 3703, 8101, 8102, 8103, 8104, 8105, 8301, 8304, 8502, 8503, 8701, 8702, 8901, 8902, 8903, 8904, 8905(b), 8906 and 9102; sec. 617, Pub. L. 111-281, 124 Stat. 2905; and Department of Homeland Security Delegation No. 0170.1.

§ 15.501 [Amended]

7. Amend § 15.501(b) by removing the word "Emergency" and adding, in its place, the lower case word "emergency".

8. Revise § 15.505 to read as follows:

§ 15.505 Changes in the certificate of inspection.

All requests for changes in manning as indicated on the COI must be sent to--

(a) The Officer in Charge, Marine Inspection (OCMI) who last issued the COI; or

(b) The OCMI conducting the inspection, if the request is made in conjunction with an inspection for certification.

§ 15.510 [Amended]

9. Amend § 15.510 by removing the word "therefrom".

10. Add § 15.535 to read as follows:

§ 15.535 Towing vessels.

(a) Applicability. Except as provided in this paragraph (a), the requirements in this section apply to a

towing vessel subject to subchapter M of this chapter. Vessels subject to this section must also meet the requirements in § 15.515(c). A towing vessel at least 8 meters (26 feet) in length, measured from end to end over the deck (excluding sheer), that is not subject to subchapter M must meet the requirements in paragraph (b) of this section if it is--

(1) A seagoing towing vessel of 300 gross tons or more subject to the provisions of subchapter I of this chapter;

(2) A vessel inspected under other subchapters of this chapter that may perform occasional towing; or

(3) A public vessel as defined in 46 U.S.C. 2101.

(b) Towing vessels 8 meters or more in length. Every towing vessel of at least 8 meters (26 feet) in length, measured from end to end over the deck (excluding sheer), must be under the direction and control of a person holding a MMC endorsed as master or mate (pilot) of towing vessels or as master or mate of vessels of greater than 200 gross register tons, holding a completed Towing Officer Assessment Record signed by a designated examiner indicating that the officer is proficient in the operation of towing vessels upon the appropriate route.

(c) Towing Vessels of Any Length on the Lower Mississippi River. In addition to the requirements of paragraph (b) of this section, any towing vessel operating in the pilotage waters of the Lower Mississippi River must be under the control of an officer who holds either a first-class pilot's endorsement for that route, or MMC officer endorsement for the Western Rivers, or who meets the requirements of either paragraph (c) (1) or (2) of this section, as applicable.

(1) Moving tank or hazardous material barges. To operate a towing vessel with tank barges or a tow of barges carrying hazardous material regulated under subchapter N or O of this chapter, the officer in charge of the towing vessel must have completed at least 12 round trips over this route as an observer, with at least 3 of those trips during hours of darkness, and must provide evidence to the Coast Guard upon request that at least 1 of the 12 round trips occurred within the last 5 years.

(2) Moving uninspected barges or no barges. To operate a towing vessel without barges or a tow of uninspected barges, the officer in charge of the towing vessel must have completed at least 4 round trips over this route as an observer, with at least 1 of those trips during hours of darkness, and must provide evidence to the Coast

Guard upon request that at least 1 of the 4 round trips occurred within the last 5 years.

11. Amend § 15.610 as follows:

a. Revise the section heading;

b. Redesignate paragraphs (a) and (b) as paragraphs (b) and (c), respectively;

c. Add new paragraph (a); and

d. In newly redesignated paragraph (c):

i. Remove the reference "paragraph (a)" wherever it appears, and add, in each place, the reference "paragraph (b)";

ii. Remove the reference "paragraphs (b) (1) or (b) (2)" and add, in its place, the reference "paragraph (c) (1) or (2)"; and

iii. In paragraphs (c) (1) and (2), add the words "to the Coast Guard" immediately after the word "evidence".

The revision and additions read as follows:

§ 15.610 Master and mate (pilot) of uninspected towing vessels.

(a) The requirements in this section apply to towing vessels, except for--

(1) Towing vessels that are subject to subchapter M in accordance with § 136.105 of this chapter;



(2) Towing vessels that are seagoing and 300 gross or more tons subject to the provisions of subchapter I of this chapter;

(3) Towing vessels that are inspected under other subchapters of this chapter that may perform occasional towing; and

(4) Towing vessels that are public vessels as defined in 46 U.S.C. 2101.

\* \* \* \* \*

§ 15.815 [Amended]

12. In § 15.815(c), remove the word "uninspected".

13. Add 46 CFR subchapter M, comprised of parts 136, 137, 138, 139, 140, 141, 142, 143, and 144, to read as follows:

SUBCHAPTER M--Towing Vessels

PART 136--CERTIFICATION

PART 137--VESSEL COMPLIANCE

PART 138--TOWING SAFETY MANAGEMENT SYSTEM (TSMS)

PART 139--THIRD-PARTY ORGANIZATIONS

PART 140--OPERATIONS

PART 141--LIFESAVING

PART 142--FIRE PROTECTION

PART 143--MACHINERY AND ELECTRICAL SYSTEMS AND EQUIPMENT

PART 144--CONSTRUCTION AND ARRANGEMENT

Part 136--CERTIFICATION

Sec.

Subpart A-General

- 136.100 Purpose.
- 136.105 Applicability.
- 136.110 Definitions.
- 136.112 Incorporation by reference.
- 136.115 Equivalents.
- 136.120 Special consideration.
- 136.130 Options for documenting compliance to obtain a Certificate of Inspection.
- 136.172 Temporary compliance for existing towing vessels.
- 136.175 Approved equipment.
- 136.180 Appeals.

Subpart B-Certificate of Inspection

- 136.200 Certificate required.
- 136.202 Certificate of Inspection phase-in period.
- 136.205 Description.
- 136.210 Obtaining or renewing a COI.
- 136.212 Inspection for certification.
- 136.215 Period of validity.
- 136.220 Posting.
- 136.230 Routes permitted.
- 136.235 Certificate of Inspection amendment.
- 136.240 Permit to proceed.
- 136.245 Permit to carry an excursion party or temporary extension or alteration of route.
- 136.250 Load lines.

Authority: 46 U.S.C. 3103, 3301, 3306, 3308, 3316, 8104, 8904; 33 CFR 1.05; DHS Delegation 0170.1.

Subpart A-General

§ 136.100 Purpose.

This part sets out the applicability for this subchapter and describes the requirements for obtaining and renewing a Certificate of Inspection (COI).

§ 136.105 Applicability.

(a) This subchapter is applicable to all U.S.-flag towing vessels as defined in § 136.110 engaged in pushing, pulling, or hauling alongside, except --

(1) A vessel less than 26 feet (7.92 meters) in length measured from end to end over the deck (excluding the sheer), unless that vessel is pushing, pulling, or hauling a barge that is carrying oil or hazardous material in bulk;

(2) A vessel engaged in one or more of the following:

(i) Assistance towing as defined in § 136.110;

(ii) Towing recreational vessels for salvage; or

(iii) Transporting or assisting the navigation of recreational vessels within and between marinas and marina facilities, within a limited geographic area, as determined by the local Captain of the Port (COTP);

(3) A workboat operating exclusively within a worksite and performing intermittent towing within the worksite;

(4) A seagoing towing vessel of 300 gross tons or more subject to the provisions of subchapter I of this chapter;

(5) A vessel inspected under other subchapters of this chapter that may perform occasional towing;

(6) A public vessel as defined in 46 U.S.C. 2101;

(7) A vessel that has surrendered its COI and is laid up, dismantled, or otherwise out of service; and

(8) A propulsion unit used for the purpose of propelling or controlling the direction of a barge where the unit is controlled from the barge, is not normally manned, and is not utilized as an independent vessel.

(b) [Reserved]

§ 136.110 Definitions.

As used in this subchapter:

ABS Rules means the standards developed and published by the American Bureau of Shipping regarding the design, construction and certification of commercial vessels.

Accommodation space means any:

- (1) Messroom;
- (2) Lounge;
- (3) Sitting area;
- (4) Recreation room;
- (5) Quarters;
- (6) Toilet space;
- (7) Shower room;
- (8) Galley;
- (9) Berthing space;
- (10) Clothing-changing room; or

(11) A similar space open to individuals.

Anniversary date means the day and the month of each year that corresponds to the date of expiration on the COI or Towing Safety Management System (TSMS) Certificate.

Approval series means the first six digits of a number assigned by the Coast Guard to approved equipment. Where approval is based on a subpart of 46 CFR chapter I, subchapter Q, the approval series corresponds to the number of the subpart. A list of approved equipment, including all of the approval series, is available at <http://cgmix.uscg.mil/Equipment/EquipmentSearch.aspx>.

Assistance towing means towing a disabled vessel for consideration as defined in 46 U.S.C. 2101.

Audit means a systematic, independent, and documented examination to determine whether activities and related results comply with a vessel's TSMS, or with another applicable Safety Management System (SMS), and whether these planned arrangements are implemented suitably to achieve stated objectives. This examination includes a thorough review of appropriate reports, documents, records, and other objective evidence to verify compliance with applicable requirements.

(1) The audit may include, but is not limited to:

(i) Examining records;

(ii) Asking responsible persons how they accomplish their assigned duties;

(iii) Observing persons performing specific tasks within their assigned duties;

(iv) Examining equipment to ensure proper maintenance and operation; and

(v) Checking training records and work environments.

(2) The audit may be limited to the random selection of a representative sampling throughout the system that presents the auditor with sufficient, objective evidence of system compliance.

Authorized classification society means a recognized classification society that has been delegated the authority to conduct certain functions and certifications on behalf of the Coast Guard.

Berthing space means a space that is intended to be used for sleeping, and is provided with installed bunks and bedding.

Bollard pull means the maximum static pulling force that a towing vessel can exert on another vessel or on an object when its propulsion engines are applying thrust at maximum horsepower.

Change in ownership means any change resulting in a change in the day-to-day operational control of a third-

party organization (TPO) that conducts audits and surveys, or a change that results in a new entity holding more than 50 percent of the ownership of the TPO.

Class Rules means the standards developed and published by a classification society regarding the design, construction, and certification of commercial vessels.

Coastwise means a route that is not more than 20 nautical miles offshore on:

- (1) Any ocean;
- (2) The Gulf of Mexico;
- (3) The Caribbean Sea;
- (4) The Bering Sea;
- (5) The Gulf of Alaska; or
- (6) Such other similar waters as may be designated by

a Coast Guard District Commander.

Cold water means water where the monthly mean low water temperature is normally 15 degrees Celsius (59 degrees Fahrenheit) or less.

Commandant means the Commandant of the U.S. Coast Guard or an authorized representative of the Commandant of the U.S. Coast Guard.

Conflict of interest means a conflict between an individual's or an organization's private interests and the interests of another party they are providing a service to

or for, including when acting in a capacity which serves the public good.

Crewmember means crewmember as defined in 46 CFR 16.105.

Deficiency means a failure to meet the minimum requirements of the vessel inspection laws or regulations.

Disabled vessel means a vessel that needs assistance, whether docked, moored, anchored, aground, adrift, or under way, but does not mean a barge or any other vessel not regularly operated under its own power.

Downstreaming means a procedure in which a towing vessel moves downstream with the current in order to approach and land squarely on another object, such as a fleet, a dock, or another tow.

Drydock examination means hauling out a vessel or placing a vessel in a drydock or slipway for an examination of all accessible parts of the vessel's underwater body and of all through-hull fittings and appurtenances.

Electronic position fixing device means a navigation receiver that meets the requirements of 33 CFR 164.41.

Engine room means the enclosed space where any main-propulsion engine is located. It comprises all deck levels within that space.



Essential system means a system that is required to ensure a vessel's survivability, maintain safe operation, control the vessel, or to ensure safety of onboard personnel, including:

- (1) Systems for:
  - (i) Detection or suppression of fire;
  - (ii) Emergency dewatering or ballast management;
  - (iii) Navigation;
  - (iv) Internal and external communication;
  - (v) Vessel control, including propulsion, steering, maneuverability and their vital auxiliaries;
  - (vi) Emergency evacuation and abandonment;
  - (vii) Lifesaving; and
  - (viii) Control of a tow;
- (2) Any critical system identified in a SMS compliant with the International Safety Management (ISM) Code requirements of 33 CFR part 96; and
- (3) Any other marine engineering system identified in an approved TSMS or identified by the cognizant Officer in Charge, Marine Inspection (OCMI) as essential to the vessel's survival, ability to maintain safe operation, ability to control the vessel, or to ensure the safety of onboard personnel.

Excepted vessel means a towing vessel that is subject to this subchapter but is excepted from certain provisions contained within this subchapter. An excepted vessel is:

(1) Used solely:

(i) Within a limited geographic area, as defined in this section;

(ii) For harbor-assist, as defined in this section;

or

(iii) For response to an emergency or a pollution event; or

(2) Excepted by the cognizant OCMI for purposes of some or all of the requirements in §§ 142.315 through 142.330, 143.235, 143.265, and subpart C of part 143 of this subchapter, based on consideration of those requirements and on reasons submitted by the vessel owner or managing operator as to why the vessel does not need to meet these requirements for the safe operation of the vessel.

Excursion party means a temporary operation not permitted by the vessel's COI. It is typically recreational in nature and 1 day or less in duration.

Existing towing vessel means a towing vessel, subject to inspection under this subchapter, that is not a new towing vessel, as defined in this section.

External audit means an audit conducted by a party with no direct affiliation to the vessel, owner, or managing operator being audited.

External survey program means a survey program conducted by a party with no direct affiliation to the vessel, owner, or managing operator being surveyed.

Fixed fire-extinguishing system means:

(1) A carbon dioxide system that meets the requirements of 46 CFR subpart 76.15 and 46 CFR 78.47-9 and 78.47-11, and that is approved by the Commandant;

(2) A clean agent system that satisfies the requirements in 46 CFR subpart 95.16 and in 46 CFR 97.37-9, and is approved by the Commandant; or

(3) A manually operated, water mist system that satisfies NFPA 750 (incorporated by reference, see § 136.112) and is approved by the Commandant.

Fleeting area means a limited geographic area, as determined by the local COTP, where individual barges are moored or assembled to make a tow. These barges are not in transport, but are temporarily marshaled and waiting for pickup by different towing vessels that will transport them to various destinations.

Galley means a space containing appliances with cooking surfaces that may exceed 121 degrees Celsius (250

degrees Fahrenheit) such as ovens, griddles, and deep fat fryers.

Great Lakes means a route on the waters of any of the Great Lakes and of the St. Lawrence River as far east as a straight line drawn from Cap de Rosiers to West Point, Anticosti Island, and west of a line along the 63rd meridian from Anticosti Island to the north shore of the St. Lawrence River.

Gross tons means the gross ton measurement of the vessel under 46 U.S.C. Chapter 145, Regulatory Measurement. For a vessel measured under only 46 U.S.C. Chapter 143, Convention Measurement, the vessel's gross tonnage measured under 46 U.S.C. Chapter 143 is used to apply all thresholds expressed in terms of gross tons.

Harbor of safe refuge means a port, inlet, or other body of water normally sheltered from heavy seas by land, and in which a vessel can navigate and safely moor. The suitability of a location as a harbor of safe refuge will be determined by the cognizant OCMI, and varies for each vessel, dependent on the vessel's size, maneuverability, and mooring gear.

Harbor-assist means the use of a towing vessel during maneuvers to dock, undock, moor, or unmoor a vessel, or to escort a vessel with limited maneuverability.

Horsepower means the horsepower stated on the vessel's COI, which is the sum of the manufacturer's listed brake horsepower for all installed propulsion engines.

Inland waters means the navigable waters of the United States shoreward of the Boundary Lines as described in 46 CFR part 7, excluding the Great Lakes and, for towing vessels, excluding the Western Rivers.

Internal Audit means an audit that is conducted by a party that has a direct affiliation to the vessel, owner, or managing operator being audited.

Internal survey program means a survey program that is conducted by a party which has a direct affiliation to the vessel, owner, or managing operator being surveyed.

International voyage means a voyage between a country to which the International Convention for Safety of Life at Sea, 1974, as amended (SOLAS) applies and a port outside that country. A country, as used in this definition, includes every territory for the international relations of which a contracting government to the Convention is responsible or for which the United Nations is the administering authority. For the United States, the term "territory" includes the Commonwealth of Puerto Rico, all possessions of the United States, and all lands held by the United States under a protectorate or mandate. For the

purposes of this subchapter, vessels are not considered as being on an "international voyage" when solely navigating the Great Lakes and the St. Lawrence River as far east as a straight line drawn from Cap des Rosiers to West Point, Anticosti Island and, on the north side of Anticosti Island, the 63rd meridian.

Lakes, bays, and sounds means a route on any of the following waters:

- (1) A lake other than the Great Lakes.
- (2) A bay.
- (3) A sound.
- (4) Such other similar waters as may be designated by the cognizant Coast Guard District Commander.

Length means the horizontal distance measured from end to end over the deck, excluding the sheer. Fittings and attachments are not included in the length measurement.

Length between perpendiculars or LBP means the horizontal distance measured between perpendiculars taken at the forward-most and after-most points on the waterline corresponding to the deepest operating draft. For a vessel that has underwater projections extending forward of the forward-most point or aft of the after-most point on the deepest waterline of the vessel, the Commanding Officer, U.S. Coast Guard Marine Safety Center, may include the

length or a portion of the length of the underwater projections in the value used in the LBP for the purposes of this subchapter. The length, or a portion of the length, of projections that contribute more than 2 percent of the underwater volume of the vessel is normally added to the actual LBP.

Limited coastwise means a route that is not more than 20 nautical miles from a harbor of safe refuge, as defined in this section.

Limited geographic area means a local area of operation as determined by the local COTP. This area is usually within a single harbor or port.

Machinery space means any enclosed space that either contains an installed internal combustion engine, machinery, or systems that would raise the ambient temperature above 45 degrees Celsius (113 degrees Fahrenheit) in all environments the vessel operates in.

Major conversion means a conversion of a vessel that:

- (1) Substantially changes the dimensions or carrying capacity of the vessel;
- (2) Changes the type of the vessel;
- (3) Substantially prolongs the life of the vessel; or
- (4) Otherwise so changes the vessel that it is essentially a new vessel, as determined by the Commandant.

Major non-conformity means a non-conformity that poses a serious threat to personnel, vessel safety, or the environment, and requires immediate corrective action.

Managing operator means an organization or person, such as the manager or the bareboat charterer of a vessel, who has assumed the responsibility for operation of the vessel from the vessel owner and who, on assuming responsibility, has agreed to take over all the duties and responsibilities imposed by this subchapter.

Nationally recognized testing laboratory or NRTL means an organization that the Occupational Safety and Health Administration (OSHA) has recognized as meeting the requirements in 29 CFR 1910.7. These requirements are for the capability, control programs, complete independence, and reporting and complaint-handling procedures to test and certify specific types of products for workplace safety. This means, in part, that an organization must have the necessary capability both as a product safety testing laboratory and as a product certification body to receive OSHA recognition as an NRTL.

New towing vessel means a towing vessel, subject to inspection under this subchapter, that:

(1) Had its keel laid or was at a similar stage of construction on or after July 20, 2017; or



(2) Underwent a major conversion that was initiated on or after July 20, 2017.

Non-conformity means a situation where objective evidence indicates that a specified SMS requirement is not fulfilled.

Objective evidence means quantitative or qualitative information, records, or statements of fact pertaining to safety or to the existence and implementation of an SMS element, which is based on observation, measurement, or testing that can be verified. This may include, but is not limited to, towing gear equipment certificates and maintenance documents, training records, repair records, Coast Guard documents and certificates, surveys, classification society reports, or TPO records.

Oceans means a route that is more than 20 nautical miles offshore on any of the following waters:

- (1) Any ocean.
- (2) The Gulf of Mexico.
- (3) The Caribbean Sea.
- (4) The Bering Sea.
- (5) The Gulf of Alaska.

(6) Such other similar waters as may be designated by the cognizant Coast Guard District Commander.

Officer in Charge, Marine Inspection or OCMI means an officer of the Coast Guard designated as such by the Coast Guard and who, under the direction of the Coast Guard District Commander, is in charge of a marine inspection zone, described in 33 CFR part 3, for the performance of duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations. The "cognizant OCMI" is the OCMI who has immediate jurisdiction over a vessel for the purpose of performing these duties.

Officer in charge of a (or the) navigational watch means the same as in 46 CFR 10.107.

Oil or hazardous material in bulk, as used in this subchapter, means that the towing vessel tows, pushes, or hauls alongside a tank barge or barges certificated to carry cargoes under subchapters D or O of this chapter.

Operating station means a steering station on the vessel, or the barge being towed or pushed, from which the vessel is normally navigated.

Owner means the owner of a vessel, as identified on the vessel's certificate of documentation or state registration.

Persons in addition to the crew mean any people onboard the vessel, including passengers, who are not a crewmember.

Policy means a specific statement of principles or a guiding philosophy that demonstrates a clear commitment by management, or a statement of values or intentions that provide a basis for consistent decision making.

Power and lighting circuit means a branch circuit as defined in Article 100 of NFPA's National Electrical Code (NEC) (incorporated by reference, see § 136.112) that serves any essential system, distribution panel, lighting, motor or motor group, or group of receptacles. Where multiple loads are served, the circuit is considered to be the conductor run that will carry the current common to all the loads. "Power limited circuit" conductors under Article 725 of the NEC and "instrumentation" conductors under Article 727 of the NEC are not considered to be power and lighting circuits.

Pressure vessel, fired or unfired, means a closed tank or cylinder containing gas, vapor, or liquid, or a combination thereof, under pressure greater than atmospheric pressure.

Procedure means a specification of a series of actions or operations that must be executed in the same manner in order to uniformly comply with applicable policies.

Protected waters means sheltered waters presenting no special hazards, such as most rivers, harbors, and lakes, and that is not determined to be exposed waters or partially protected waters by the cognizant OCMI.

Propulsor means a device (e.g., propeller or water jet) that imparts force to a column of water in order to propel a vessel, together with any equipment necessary to transmit the power from the propulsion machinery to the device (shafting, gearing, etc.).

Recognized classification society means a classification society recognized by the Coast Guard in accordance with part 8 of this chapter.

Replacement in kind means replacement of equipment or components that have the same technical specifications as the original item and provide the same service. If the replacement item upgrades the system in any way, the change is not a replacement in kind.

Rescue boat means a boat designed to rescue persons in distress and to marshal survival craft.

Rivers means a route on any river, canal, or other similar body of water designated by the cognizant OCMI.

Safety Management System or SMS means a structured and documented system that enables personnel involved in vessel operations or management, as identified in the SMS, to effectively implement the safety and environmental protection requirements of this subchapter, and is routinely exercised and audited.

Skiff means a small auxiliary boat carried on board a towing vessel.

Survey means an examination of the vessel, including its systems and equipment, to verify compliance with applicable regulations, statutes, conventions, and treaties.

Terminal gear means the additional equipment or appurtenances at either end of the hawser or tow cable that connects the towing vessel and its tow together. Terminal gear may include such items as winches, thimbles, chafing gear, shackles, pendants, or bridles.

Third-party organization or TPO means an organization approved by the Coast Guard to conduct independent verifications to assess whether towing vessels or their TSMSs comply with applicable requirements contained in this subchapter.

Tow means the barge(s), vessel(s), or object(s) being pulled, pushed, or hauled alongside a towing vessel.

Towing vessel means a commercial vessel engaged in or intending to engage in the service of pulling, pushing, or hauling alongside, or any combination of pulling, pushing, or hauling alongside.

Towing Safety Management System or TSMS means an SMS for a towing vessel as described in part 138 of this subchapter.

Towing vessel record or TVR means a book, notebook, or electronic record used to document events as required by this subchapter.

Unsafe condition means a major non-conformity observed on board a vessel, or an incident that would cause the owner or managing operator to request a permit to proceed from the Coast Guard.

Unsafe practice means a habitual or customary action or method, or a single action, that creates a significant risk of harm to life, property, or the marine environment, or that contravenes a recognized standard of care contained in law; regulation; applicable international convention; or international, national, or industry consensus standard.

Warm water means water where the monthly mean low water temperature is normally more than 15 degrees Celsius (59 degrees Fahrenheit).

Western Rivers means the Mississippi River, its tributaries, South Pass, and Southwest Pass, to the navigational demarcation lines dividing the high seas from harbors, rivers, and other inland waters of the United States, and the Port Allen-Morgan City Alternate Route, and that part of the Atchafalaya River above its junction with the Port Allen-Morgan City Alternate Route including the Old River and the Red River, and those waters specified in 33 CFR 89.25 and 89.27, and such other, similar waters as are designated by the COTP.

Workboat means a vessel that pushes, pulls, or hauls alongside within a worksite.

Worksite means an area specified by the cognizant OCMI within which workboats are operated over short distances for moving equipment in support of dredging, construction, maintenance, or repair work. A worksite may include shipyards, owner's yards, or lay-down areas used by marine construction projects. This definition does not include the movement of barges carrying oil or hazardous material in bulk.

Work space means any area on the vessel where the crew may be present while on duty and performing their assigned tasks.

§ 136.112 Incorporation by reference.

(a) Certain material is incorporated by reference into this subchapter with the approval of the Director of the Federal Register under 5 U.S.C 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish a document in the Federal Register and the material must be available to the public. All approved material is available for inspection at the U.S. Coast Guard, Office of Design and Engineering Standards (CG-ENG), 2703 Martin Luther King Jr. Avenue SE., Stop 7509, Washington, DC 20593-7509, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to:

[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(b) American Boat and Yacht Council (ABYC), 613 Third Street, Suite 10, Annapolis, MD 21403, 410-990-4460, <http://www.abycinc.org/>.

(1) E-11 (2003) – AC and DC Electrical Systems on Boats, dated July 2003, IBR approved for §143.520(a) of this subchapter.



(2) H-2 (2000) - Ventilation of Boats Using Gasoline, dated July 2000, IBR approved for § 143.520(a) of this subchapter.

(3) H-22 (2005) - Electric Bilge Pump Systems, dated July 2005, IBR approved for § 143.520(a) of this subchapter.

(4) H-24 (2007) - Gasoline Fuel Systems, dated July 2007, IBR approved for § 143.520(a) of this subchapter.

(5) H-25 (2003) - Portable Gasoline Fuel Systems, reaffirmed July 2003, IBR approved for §§ 143.265(b) and 143.520(a) of this subchapter.

(6) H-32 (2004) - Ventilation of Boats Using Diesel Fuel, dated July 2004, IBR approved for § 143.520(a) of this subchapter.

(7) H-33 (2005) - Diesel Fuel Systems, dated July 2005, IBR approved for §§ 143.265(e) and 143.520(a) of this subchapter.

(8) P-1 (2002) - Installation of Exhaust Systems for Propulsion and Auxiliary Engines, dated July 2002, IBR approved for §§ 143.520(a) and 144.415 of this subchapter.

(9) P-4 (2004) - Marine Inboard Engines and Transmissions, dated July 2004, IBR approved for § 143.520(a) of this subchapter.

(c) American Bureau of Shipping (ABS), ABS Plaza, 16855 Northchase Drive, Houston, TX 77060, 281-877-5800, <http://www.eagle.org>.

(1) Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways, 2007, IBR approved for §§ 143.515(a), 143.540(b), 143.550(a), 143.580(b), and 144.205(a) of this subchapter.

(2) Rules for Building and Classing Steel Vessels Under 90 Meters (295 Feet) in Length, 2006, including Supplement to Part 1 (dated January 1, 2008) and Corrigenda Notices 1 to 13 (in effect as of July 1, 2010), IBR approved for §§ 143.515(a), 143.540(a), 143.545(b), 143.550(a), 143.555(b), 143.580(a), 143.600, and 144.205(a) of this subchapter.

(d) American Society for Quality (ASQ), Quality Press, P.O. Box 3005, Milwaukee, WI 53201-3005, 800-248-1946, <http://asq.org/>.

(1) ANSI/ISO/ASQ Q9001-2000, Quality management systems - Requirements, approved December 13, 2000, IBR approved for §§ 138.310(d), 139.120(d) and 139.130(b) of this subchapter.

(2) [Reserved]

(e) FM Approvals, P.O. Box 9102, Norwood, MA 02062, 781-440-8000, <http://www.fmglobal.com/>.

(1) Approval Standard for Storage Cabinets (Flammable and Combustible liquids), Class Number 6050 (Standard 6050), dated December 1996, IBR approved for § 142.225(c) of this subchapter.

(2) [Reserved]

(f) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) Resolution A.520(13) - Code of Practice for the Evaluation, Testing and Acceptance of Prototype Novel Life-saving Appliances and Arrangements, adopted November 17, 1983, IBR approved for § 141.225(c) of this subchapter.

(2) Resolution A.658(16) - Use and Fitting of Retro-Reflective Materials on Life-saving Appliances, adopted October 19, 1989, IBR approved for § 141.340(f) of this subchapter.

(3) Resolution A.688(17) - Fire Test Procedures For Ignitability of Bedding Components, adopted November 6, 1991, IBR approved for § 144.430(b) of this subchapter.

(4) Resolution A.760(18) - Symbols Related to Life-Saving Appliances and Arrangements, adopted November 4, 1993, IBR approved for § 141.340(h) of this subchapter.

(5) International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS), Consolidated Edition

(including Erratum), 2009, IBR approved for §§ 136.115(b), 141.105(b) and (c), and 142.205(a) of this subchapter.

(g) International Organization for Standardization (ISO), Case Postal 56, CH-1211 Geneva 20, Switzerland, +41 22 749 01 11, <http://www.iso.org/>.

(1) ISO 9001:2008(E) - International Standard: Quality management systems - Requirements, Fourth edition, dated November 15, 2008 (corrected version dated July 15, 2009), IBR approved for §§ 138.310(d) and 139.130(b) of this subchapter.

(2) ISO 14726:2008(E) - International Standard: Ships and marine technology-Identification colours for the content of piping systems, First edition, dated May 1, 2008, IBR approved for § 143.250(e) of this subchapter.

(h) National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169, 800-344-3555, <http://www.nfpa.org/>.

(1) NFPA 10 - Standard for Portable Fire Extinguishers, 2007 Edition, effective August 17, 2006, IBR approved for § 142.240(a) of this subchapter.

(2) NFPA 70 - National Electrical Code (NEC), 2002 Edition, effective August 2, 2001, IBR approved for §§ 136.110, 143.555(b), and 143.565(b) of this subchapter.

(3) NFPA 302 - Fire Protection Standard for Pleasure and Commercial Motor Craft, 1998 Edition, IBR approved for §§ 143.265(e) and 144.415 of this subchapter.

(4) NFPA 306 - Standard for the Control of Gas Hazards on Vessels, 2014 Edition, effective June 17, 2013, IBR approved for § 140.665(a) of this subchapter.

(5) NFPA 750 - Standard on Water Mist Fire Protection Systems, 2006 Edition, effective February 16, 2006, IBR approved for § 136.110.

(6) NFPA 1971 - Standard on Protective Ensembles for Structural Fire-Fighting and Proximity Fire-Fighting, 2007 Edition, effective August 17, 2006, IBR approved for § 142.226(a) of this subchapter.

(i) Society of Automotive Engineers (SAE), 400 Commonwealth Drive, Warrendale, PA 15096, 724-776-4841, <http://www.sae.org/>.

(1) ANSI/SAE Z 26.1-1996, American National Standard for Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways - Safety Standard, approved August 11, 1997, IBR approved for § 144.905(e) of this subchapter.

(2) SAE J1475 Revised JUN96 - Hydraulic Hose Fitting for Marine Applications, revised June 1996, IBR approved for § 143.265(d) of this subchapter.

(3) SAE J1942 Revised APR2007 - Hose and Hose Assemblies for Marine Applications, revised April 2007, IBR approved for § 143.265(d) of this subchapter.

(j) UL (formerly Underwriters Laboratories, Inc.), 12 Laboratory Drive, Research Triangle Park, NC 27709, 919-549-1400, <http://www.ul.com/>.

(1) UL 217 - Standard for Safety for Single and Multiple Station Smoke Alarms, Sixth Edition, dated August 25, 2006 (including revisions through November 20, 2012), IBR approved for § 142.330(b) of this subchapter.

(2) UL 1104 - Standards for Safety for Marine Navigation Lights, Second Edition, dated October 29, 1998, IBR approved for § 143.415(a) of this subchapter.

(3) UL 1275 - Standard for Safety for Flammable Liquid Storage Cabinets, Third Edition, dated June 30, 2005 (including revisions through February 26, 2010), IBR approved for § 142.225(c) of this subchapter.

§ 136.115 Equivalents.

(a) The Coast Guard may approve any arrangement, fitting, appliance, apparatus, equipment, calculation, information, or test that provides a level of safety equivalent to that established by any specific provision of this subchapter. Submit requests for approval to the Coast Guard via the cognizant OCMI. The Marine Safety Center may

require engineering evaluations and tests to verify the equivalence.

(b) The Coast Guard may accept compliance with the provisions of SOLAS applicable to the vessel's size and route (incorporated by reference, see § 136.112), as an equivalent to specific requirements of this subchapter. Submit requests for a determination of equivalency for a particular vessel to the Coast Guard via the cognizant OCMI.

(c) Alternative compliance arrangement provisions related to SMSs are contained in § 138.225 of this subchapter.

(d) Alternate compliance arrangements must be documented within the TSMS applicable to the vessel.

§ 136.120 Special consideration.

Based on a review of relevant information and on the TSMS applicable to the vessel, the cognizant OCMI who issues the COI may give special consideration to authorizing departures from specific requirements, when unusual circumstances or arrangements warrant such departures and when an equivalent level of safety is provided.

§ 136.130 Options for documenting compliance to obtain a Certificate of Inspection.

(a) There are two options for documenting compliance with the requirements in this subchapter to obtain a COI:

(1) The Coast Guard option, in which all inspections of the towing vessel are conducted by the Coast Guard, as discussed in § 136.210 and parts 137 and 140 through 144 of this subchapter; or

(2) The TSMS option, as discussed in § 136.210, and in parts 137 through 144 of this subchapter.

(b) Regardless of the option chosen, the Coast Guard is responsible for issuing a towing vessel COI, and may board a vessel at any time to verify compliance and take appropriate action.

(c) An owner or managing operator choosing the Coast Guard option may use a management system, vessel operations manual, towing vessel record (TVR), or logbook to meet this subchapter's recordkeeping requirements.

(d) When submitting an application for inspection, the owner or managing operator must specify on the application which option he or she chooses for each particular towing vessel. Owners or managing operators may choose different options for the individual vessels within their fleets.

(e) Requests to change options during the period of validity of an existing COI must be accompanied by an



application to the OCMI for a new COI. If the requirements for the new option are met, the OCMI will issue the vessel a new COI.

§ 136.172 Temporary compliance for existing towing vessels.

An existing towing vessel subject to this subchapter will remain subject to Coast Guard regulations applicable to the vessel on [INSERT DATE 29 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] until either July 20, 2018 or the date the vessel obtains a COI, whichever date is earlier.

§ 136.175 Approved equipment.

Where equipment in this subchapter is required to be of an approved type, such equipment requires the specific approval of the Coast Guard. A list of approved equipment and materials may be found online at <http://cgmix.uscg.mil/Equipment/EquipmentSearch.aspx>. Any OCMI may be contacted for information concerning approved equipment and materials.

§ 136.180 Appeals.

Any person directly affected by a decision or action taken under this subchapter, by or on behalf of the Coast Guard, may appeal in accordance with 46 CFR 1.03.

Subpart B—Certificate of Inspection

§ 136.200 Certificate required.

(a) A towing vessel may not be operated without having onboard a valid COI issued by the Coast Guard as required by § 136.202.

(b) Each towing vessel certificated under the provisions of this subchapter must be in full compliance with the terms of the COI.

(c) If necessary to prevent the delay of the vessel, the Coast Guard may issue a temporary COI to a towing vessel, pending the issuance and delivery of the permanent COI. The temporary COI must be carried in the same manner as the regular COI and is equivalent to the permanent COI that it represents.

(d) A towing vessel on a foreign voyage between a port in the United States and a port in a foreign country whose COI expires during the voyage may lawfully complete the voyage without a valid COI, provided the voyage is completed within 30 days of expiration, and provided that the COI did not expire within 15 days of sailing on the foreign voyage from a U.S. port.

§ 136.202 Certificate of Inspection phase-in period.

(a) All owners or managing operators of more than one existing towing vessel required to have a COI by this subchapter must ensure that each existing towing vessel

under their ownership or control is issued a valid COI according to the following schedule:

(1) By July 22, 2019, at least 25 percent of the towing vessels must have valid COIs on board;

(2) By July 20, 2020, at least 50 percent of the towing vessels must have valid COIs on board;

(3) By July 19, 2021, at least 75 percent of the towing vessels must have valid COIs on board; and

(4) By July 19, 2022, 100 percent of the towing vessels must have valid COIs on board.

(b) All owners or managing operators of only one existing towing vessel required to have a COI by this subchapter must ensure the vessel has an onboard, valid COI by July 20, 2020.

(c) A new towing vessel must obtain a COI before it enters into service.

§ 136.205 Description.

A towing vessel's COI describes the vessel, routes that it may travel, minimum manning requirements and total persons allowed onboard, safety equipment and appliances required to be onboard, horsepower, and other information pertinent to the vessel's operations as determined by the OCMI.

§ 136.210 Obtaining or renewing a COI.

Owners and managing operators must submit Form CG-3752, "Application for Inspection of U.S. Vessel," to the cognizant OCMI where the inspection will take place. The owner or managing operator must submit the application at least 30 days before the vessel will undergo the initial inspection for certification. The owner or managing operator must schedule an inspection for this initial certification with the cognizant OCMI at least 3 months before the vessel is to undergo the inspection for certification.

(a) In addition to Form CG-3752, the owner or managing operator must submit:

(1) For initial certification:

(i) Vessel particular information; and

(ii) Number of persons in addition to the crew, if requested; or

(2) For a renewal of certification:

(i) Any changes to the information in paragraph

(a)(1) of this section; and

(ii) A description of any modifications to the vessel.

(b) In addition to Form CG-3752 and the requirements of paragraph (a) of this section, the owner or managing operator of vessels utilizing the TSMS option must submit:

(1) Objective evidence that the owner or managing operator and the vessel are in compliance with the TSMS requirements in part 138 of this subchapter; and

(2) Objective evidence that the vessel's structure, stability, and essential systems comply with the applicable requirements of this subchapter for the intended route and service. This objective evidence may be in the form of a survey report issued by a TPO or another form acceptable to the Coast Guard.

§ 136.212 Inspection for certification.

(a) Frequency of inspections. After a towing vessel receives its initial COI, the OCMI will inspect a towing vessel subject to this subchapter located in his or her jurisdiction at least once every 5 years. The OCMI must ensure that every towing vessel is of a structure suitable for its intended route. If the OCMI deems it necessary, he or she may direct the vessel to get underway, and may adopt any other suitable means to test the towing vessel and its equipment.

(b) Nature of inspection. The inspection will ensure that the vessel is in satisfactory condition and fit for the service for which it is intended, and that it complies with the applicable statutes and regulations for such vessels. The inspection will include inspections of the

structure, pressure vessels and their appurtenances, piping, main and auxiliary machinery, electrical installations, lifesaving appliances, fire detecting and extinguishing equipment, pilot boarding equipment, and other equipment. The inspection will also determine that the vessel is in possession of any valid certificates or licenses issued by the Federal Communications Commission, if required. The inspection will also include an examination of the vessel's lights, means of making sound signals and distress signals, and pollution prevention systems and procedures.

(c) Time of issuance of COI. The OCMI will issue a vessel a new COI after the vessel successfully completes the inspection for certification.

§ 136.215 Period of validity.

(a) A COI for a towing vessel is valid for 5 years from the date of issue.

(b) For a towing vessel utilizing the TSMS option, the COI is invalid upon the expiration or revocation of the owner or managing operator TSMS certificate or the ISM Code Certificate.

(c) A COI may be suspended and withdrawn or revoked by the cognizant Officer in Charge, Marine Inspection at

any time for noncompliance with the requirements of this subchapter.

§ 136.220 Posting.

(a) The original COI must be framed under glass or other transparent material and posted in a conspicuous place onboard the towing vessel.

(b) If posting is impracticable, the COI must be kept on board in a weathertight container and must be readily available.

§ 136.230 Routes permitted.

(a) The area of operation for each towing vessel and any necessary operational limits are determined by the cognizant OCMI and recorded on the vessel's COI. Each area of operation, referred to as a route, is described on the COI under the major headings "Oceans," "Coastwise," "Limited Coastwise," "Great Lakes," "Lakes, Bays, and Sounds," or "Rivers," as applicable. Additional limitations imposed or extensions granted are described by reference to bodies of waters, geographical points, distances from geographical points, distances from land, depths of channel, seasonal limitations, and similar factors.

(b) Operation of a towing vessel on a route of lesser severity than those specifically described or designated on

the COI is permitted, unless the route is expressly prohibited on the COI. The general order of decreasing severity of routes is: oceans; coastwise; limited coastwise; Great Lakes; lakes, bays, and sounds; and rivers. The cognizant OCMI may prohibit a vessel from operating on a route of lesser severity than the primary route on which a vessel is authorized to operate, if local conditions necessitate such a restriction.

(c) When designating a permitted route or imposing any operational limits on a towing vessel, the cognizant OCMI may consider:

(1) The route-specific requirements of this subchapter;

(2) The performance capabilities of the vessel based on design, scantlings, stability, subdivision, propulsion, speed, operating modes, maneuverability, and other characteristics;

(3) The suitability of the vessel for nighttime operations and use in all weather conditions;

(4) Vessel operations in globally remote areas or severe environments not covered by this subchapter. Such areas may include, but are not limited to, polar regions, remote islands, areas of extreme weather, or other remote



areas where timely emergency assistance cannot be anticipated; and

(5) The TSMS applicable to the vessel, if the vessel has one.

§ 136.235 Certificate of Inspection amendment.

(a) An amended COI may be issued at any time by the cognizant OCMI. The amended COI replaces the original, but the expiration date remains the same as that of the original. An amended COI may be issued to authorize and record a change in the dimensions, gross tonnage, owner, managing operator, manning, persons permitted, route permitted, conditions of operations, or equipment of a towing vessel, from that specified in the current COI.

(b) The owner or managing operator of the towing vessel must make a request for an amended COI to the cognizant OCMI any time there is a change in the character of the vessel or in its route, equipment, ownership, operation, or similar factors specified in its current COI. The OCMI may need to conduct an inspection before issuing an amended COI.

(c) For those vessels selecting the TSMS option, the owner or managing operator of the towing vessel must provide to the OCMI objective evidence of compliance with

the requirements in this subchapter prior to the issuance of an amended COI. The evidence must:

(1) Be from a TPO and prepared in accordance with parts 138 and 139 of this subchapter; and

(2) Consider the change in the character of a vessel or in its route, equipment, ownership, operation, or similar factors specified in the vessel's current COI.

§ 136.240 Permit to proceed.

Permission to proceed to another port for repairs (Form CG-948) may be required for a towing vessel that is no longer in compliance with its COI. This permission may be necessary in certain situations, including damage to the vessel, failure of an essential system, or failure to comply with a regulation, including failure to comply with the TSMS requirements, if appropriate.

(a) What a vessel with a TSMS must do before proceeding to another port for repairs. A vessel with a TSMS may proceed to another port for repair, if:

(1) In the judgment of the owner, managing operator, or master, the trip can be completed safely;

(2) The TSMS addresses the condition of the vessel that has resulted in non-compliance and the necessary conditions under which the vessel may safely proceed to another port for repair;

(3) The vessel proceeds as provided in the TSMS and does not tow while proceeding, unless the owner or managing operator determines that it is safe to do so; and

(4) The owner or managing operator notifies the cognizant OCMI in whose zone the non-compliance occurred or is discovered, before the vessel proceeds. The owner or operator must also notify the cognizant OCMI in any other OCMI zones through which the vessel will transit.

(b) What another vessel must do before proceeding to another port for repairs. If a vessel does not have a TSMS, or a vessel has one but it does not address the condition of the vessel that has resulted in non-compliance or the necessary conditions under which the vessel may safely proceed to another port for repair, the owner, managing operator, or master must request permission to proceed from the cognizant OCMI in whose zone the non-compliance occurs or is discovered. This permission operates as follows:

(1) The request for permission to proceed may be made electronically, in writing, or orally. The cognizant OCMI may require a written description, a damage survey, or other documentation to assist in determining the nature and seriousness of the non-compliance.

(2) The vessel will not engage in towing, unless the cognizant OCMI determines it is safe to do so.

(3) The Coast Guard may issue the permit either on Form CG-948, "Permit to Proceed to Another Port for Repairs," or in letter form, and will state the conditions under which the vessel may proceed to another port for repair.

(c) Inspection or examination. The cognizant OCMI may require an inspection of the vessel by a Coast Guard Marine Inspector or an examination by a surveyor from a TPO prior to the vessel proceeding.

§ 136.245 Permit to carry excursion party or temporary extension or alteration of route.

(a) A towing vessel must obtain approval to engage in an excursion prior to carrying a greater number of persons than permitted by the COI, or to temporarily extend or alter its area of operation.

(b) For a vessel utilizing the TSMS option, the vessel may engage in an excursion, if:

(1) In the opinion of the owner, managing operator, or master the operation can be undertaken safely;

(2) The TSMS addresses the temporary excursion operation contemplated; the necessary conditions under which the vessel may safely conduct the operation,

including the number of persons the vessel may carry; the crew required; and any additional lifesaving or safety equipment required;

(3) The vessel proceeds as provided in the TSMS; and

(4) The owner, managing operator, or master notifies the cognizant OCMI at least 48 hours prior to the temporary excursion operation. The cognizant OCMI may require submission of pertinent provisions of the TSMS applicable to the vessel for review and onboard verification of compliance. If the cognizant OCMI has reasonable cause to believe that the TSMS applicable to the vessel is insufficient for the intended excursion, additional information may be requested and/or additional requirements may be imposed.

(c) If the towing vessel is not under a TSMS, or the TSMS applicable to the vessel does not address the temporary excursion operation:

(1) The owner or managing operator must submit an application to the cognizant OCMI. The application must state the intended route, number of passengers or guests, and any other conditions applicable to the excursion that exceed those specified in its COI.

(2) The cognizant OCMI may issue the permit either on Form CG-949, "Permit To Carry Excursion Party," or in

letter form. The cognizant OCMI will indicate on the permit the conditions under which it is issued, the number of persons the vessel may carry, the crew required, any additional lifesaving or safety equipment required, the route for which the permit is granted, and the dates on which the permit is valid. The application may be made electronically, in writing, or orally.

(3) The vessel may not engage in towing during the excursion, unless the cognizant OCMI determines it is safe to do so.

(d) The cognizant OCMI may require an inspection of the vessel by a Coast Guard Marine Inspector or an examination by a surveyor from a TPO prior to the vessel proceeding.

§ 136.250 Load lines.

Vessels described in Table 136.250 of this section that operate on the Great Lakes or outside the Boundary Lines, as set forth in 46 CFR part 7, are subject to load line requirements in subchapter E of this chapter in the following circumstances:

Table 136.250

	A vessel that--	Is subject to load line requirements in subchapter E of this chapter if it is--
(a)	Is on an international voyage--	(1) Seventy nine (79) feet (24 meters) or more in length and built on or after July 21, 1968; or
		(2) One hundred and fifty (150) gross tons or more if built before July 21, 1968.
(b)	Is on a domestic voyage--	(1) Seventy nine (79) feet (24 meters) or more in length and built on or after January 1, 1986; or
		(2) One hundred and fifty (150) gross tons or more if built before January 1, 1986.

## PART 137--VESSEL COMPLIANCE

### Sec.

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Authority: 46 U.S.C. 3103, 3301, 3306, 3308, 3316, 8104, 8904; 33 CFR 1.05; DHS Delegation 0170.1.

#### Subpart A—General

##### § 137.100 Purpose.

This part describes the procedures owners or managing operators of towing vessels must use to demonstrate compliance with the requirements of this subchapter.

##### § 137.120 Responsibility for compliance.

(a) The owner and managing operator must ensure that the towing vessel is in compliance with this subchapter and other applicable laws and regulations at all times.

(b) Non-conformities and deficiencies must be corrected in a timely manner.

##### § 137.130 Program for vessel compliance for the Towing Safety Management System (TSMS) option.

The owner or managing operator of a towing vessel choosing to use the TSMS option must implement an external or internal survey program for vessel compliance. The program for vessel compliance can be either:



(a) An external survey program, in which the owner or managing operator would have a third-party organization (TPO) conduct either the surveys required by § 137.205, the examinations required by § 137.310, or both; or

(b) An internal survey program, in which the owner or managing operator would conduct either the surveys required by § 137.210, the examinations required by § 137.315, or both, using internal resources or contracted surveyors. The internal survey program would be conducted with the oversight of a TPO.

(c) Each program of either type must include:

(1) Owner or managing operator policy regarding the surveying and examination of towing vessels;

(2) Procedures for conducting towing vessel surveys and examinations, as described in this part;

(3) Procedures for reporting and correcting non-conformities and deficiencies;

(4) Identification of the individual or individuals responsible for the management of the program, and their qualifications; and

- (5) Documentation of compliance activities.

§ 137.135 Reports and documentation required for the TSMS option.

(a) The TSMS option requires a report detailing each internal survey of a towing vessel. Each report must include:

- (1) Vessel name;
- (2) Other vessel identifier, such as an official number or State number;
- (3) Name and business address of owner or managing operator;
- (4) Date and location of the survey;
- (5) Date the report of the survey was issued, if different than the date the survey was concluded;
- (6) Name of the surveyors;
- (7) Name and business address of the TPO the surveyors represent, if applicable;
- (8) Signatures of surveyors;
- (9) A descriptive list of the items examined or witnessed during each survey;
- (10) A descriptive list of all non-conformities identified during each survey, including those that were corrected during the course of the survey;
- (11) A descriptive list of:

(i) All non-conformities remaining at the end of each survey;

(ii) The required corrective actions;

(iii) The latest date of required corrective action;

and

(iv) A description of the means by which the corrective actions were verified;

(12) A descriptive list of items that need to be repaired or replaced before the vessel continues service; and

(13) A statement that the vessel complies with the applicable requirements of this subchapter and is fit for its route and service, subject to the correction of non-conformities.

(b) The owner or managing operator must provide objective evidence of compliance with this part in accordance with the TSMS applicable to the vessel.

Subpart B—Inspections and Surveys for Certification

§ 137.200 Documenting compliance for the Coast Guard inspection option.

A towing vessel subject to this subchapter and choosing the Coast Guard inspection option, or required to have the Coast Guard inspection option, must undergo an

annual inspection within 3 months before or after the COI anniversary date.

(a) Owners and managing operators must contact the cognizant Officer in Charge, Marine Inspection (OCMI) to schedule an inspection at a time and place the OCMI approves. No written application is required.

(b) Annual inspections will be similar to the inspection for certification but will cover less detail unless the marine inspector finds deficiencies or determines that a major change has occurred since the last inspection. If the marine inspector finds deficiencies or finds that a major change to the vessel has occurred, he or she will conduct a more detailed inspection to ensure that the vessel is in satisfactory condition and fit for the service for which it is intended. If the vessel passes the annual inspection, the Coast Guard will endorse the vessel's current Certificate of Inspection (COI).

(c) If the annual inspection reveals the need, the owner or managing operator must make any or all repairs or improvements within the time period specified by the OCMI. The OCMI may use Form CG-835, "Notice of Merchant Marine Inspection Requirements," to record deficiencies discovered during the inspection. The OCMI will then give a copy of the completed form to the master of the vessel.

(d) Nothing in this subpart limits the marine inspector from conducting any tests or inspections he or she deems necessary to be assured of the vessel's seaworthiness or fitness for its route and service.

§ 137.202 Documenting compliance for the TSMS option.

The owner or managing operator of a towing vessel that chooses the TSMS option for a towing vessel must document compliance with this subpart as follows:

(a) Prior to obtaining the vessel's initial COI, the owner or managing operator must provide a report to the Coast Guard of a survey as described in § 137.215 that demonstrates that the vessel complies the requirements of this part.

(b) For the re-issuance of the vessel's COI, the owner or managing operator must:

(1) Provide objective evidence of an external survey program as described in § 137.205; or

(2) Provide objective evidence of an internal survey program as described in § 137.210.

§ 137.205 External survey program.

(a) The owner or managing operator of a towing vessel that has selected the TSMS option and who has chosen to demonstrate compliance through an external survey program must:

(1) Have the vessel surveyed annually by a surveyor from a TPO;

(2) Ensure the survey is conducted in accordance with § 137.215;

(3) Ensure the survey is conducted within 3 months of the anniversary date of the COI;

(4) Ensure the TSMS applicable to the vessel includes policies and procedures for complying with this section; and

(5) Make the applicable sections of the TSMS available to the surveyor.

(b) The TPO must issue a report that meets the requirements in § 137.135.

§ 137.210 Internal survey program.

(a) The owner or managing operator of a towing vessel that has selected the TSMS option and who has chosen to demonstrate vessel compliance through an internal survey program must ensure that the TSMS applicable to the vessel includes:

(1) Procedures for surveying and testing described in § 137.215;

(2) Equipment, systems, and onboard procedures to be surveyed;

(3) Identification of items that would need repair or replacement before the vessel could continue in service, such as deficiencies identified on Form CG-835, "Notice of Merchant Marine Inspection Requirements," noted survey deficiencies, non-conformities, or other corrective action reports;

(4) Procedures for documenting and reporting non-conformities and deficiencies;

(5) Procedures for reporting and correcting major non-conformities;

(6) The responsible person or persons in management who have the authority to:

(i) Stop all vessel operations pending the correction of non-conformities and deficiencies;

(ii) Oversee vessel compliance activities; and

(iii) Track and verify that non-conformities and deficiencies were corrected;

(7) Procedures for recordkeeping; and

(8) Procedures for assigning personnel with requisite experience and expertise to carry out the elements of the survey.

(b) The owner or managing operator is not required to survey the items as described in § 137.220 as one event, but may survey items on a schedule over time, provided that

the interval between successive surveys of any item does not exceed 1 year, unless otherwise prescribed.

§ 137.212 Coast Guard oversight of vessel survey program for vessels under the TSMS option.

If the cognizant OCMI has reasonable cause to believe that a vessel's survey program is deficient, that OCMI may:

(a) Require an audit or survey of the vessel in the presence of a representative of the cognizant OCMI;

(b) Increase the frequency of the audits;

(c) For vessels under the internal survey program, require that the vessel comply with the external survey program requirements of § 137.205;

(d) Require any other specific action within his or her authority that he or she considers appropriate; or

(e) For repeatedly deficient surveys, remove the vessel and or owner or managing operator from using the TSMS option.

§ 137.215 General conduct of survey.

(a) When conducting a survey of a towing vessel as required by this subpart, the surveyor must determine that the item or system functions as designed, is free of defects or modifications that reduce its effectiveness, is suitable for the service intended, and functions safely in a manner consistent for vessel type, service and route.



(b) The survey must address the items in § 137.220 as applicable, and must include:

(1) A review of certificates and documentation held on the vessel;

(2) A visual examination and tests of the vessel and its equipment and systems in order to confirm that their condition is properly maintained and that proper quantities are onboard;

(3) A visual examination of the systems used in support of drills or training to determine that the equipment utilized during a drill operates as intended; and

(4) A visual examination to confirm that unapproved modifications were not made to the vessel or its equipment.

(c) Beyond the minimum standards required by this section, the thoroughness and stringency of the survey will depend upon the condition of the vessel and its equipment. If a surveyor finds a vessel to have multiple deficiencies indicative of systematic failures to maintain the installed equipment, he or she will conduct an expanded examination to ensure all deficiencies are identified and corrective action is promptly taken.

(d) The owner or managing operator must notify the cognizant OCMI when the condition of the vessel, its

equipment, systems, or operations, create an unsafe condition.

(e) The cognizant OCMI may require that the owner or managing operator provide for the attendance of a surveyor or auditor from a TPO to assist with verifying compliance with this part.

§ 137.220 Scope.

The owner or managing operator of a towing vessel that has selected the TSMS option must examine or must have examined the following systems, equipment, and procedures to ensure that the vessel and its equipment are suitable for the service for which the vessel is certificated:

(a) TSMS. (1) Verify that the vessel is enrolled in a TSMS that complies with part 138 of this subchapter.

(2) Verify that the policies and procedures applicable to the vessel are available to the crew.

(3) Verify that internal and external audits are conducted in accordance with the approved TSMS.

(4) Verify that recordkeeping requirements are met.

(b) Hull structure and appurtenances. Verify that the vessel complies with part 144 of this subchapter, examine the condition of, and where appropriate, witness the operation of the following:

(1) All accessible parts of the exterior and interior of the hull, the watertight bulkheads, and weather decks.

(2) All watertight closures in the hull, decks, and bulkheads, including through hull fittings and sea valves.

(3) Superstructure, masts, and similar arrangements constructed on the hull.

(4) Railings and bulwarks and their attachments to the hull structure.

(5) The presence of appropriate guards or rails.

(6) All weathertight closures above the weather deck and the provisions for drainage of sea water from the exposed decks.

(7) Watertight doors, verifying local and remote operation and proper fit.

(8) All accessible interior spaces to ensure that they are adequately ventilated and drained, and that means of escape are maintained and operate as intended.

(9) Vessel markings.

(c) Machinery, fuel, and piping systems. Verify that the vessel complies with applicable requirements contained in part 143 of this subchapter, examine the condition of, and where appropriate, witness the operation of:

(1) Engine control mechanisms, including primary and alternate means, if the vessel is equipped with alternate

means, of starting machinery, directional controls, and emergency shutdowns;

(2) All machinery essential to the routine operation of the vessel, including generators and cooling systems;

(3) All fuel systems, including fuel tanks, tank vents, piping, and pipe fittings;

(4) All valves in fuel lines, including local and remote operation;

(5) All overboard discharge and intake valves and watertight bulkhead pipe penetration valves;

(6) Means provided for pumping bilges; and

(7) Machinery shut-downs and alarms.

(d) Steering systems. Examine the condition of, and where appropriate, witness the operation of:

(1) Steering systems and equipment ensuring smooth operation;

(2) Auxiliary means of steering, if installed; and

(3) Alarms.

(e) Pressure vessels and boilers. Verify that the vessel complies with applicable requirements in part 143 of this subchapter.

(f) Electrical. Verify that the vessel complies with applicable requirements in part 143 of this subchapter,

examine the condition of, and where appropriate, witness the operation of:

(1) All cables, as far as practicable, without undue disturbance of the cable or electrical apparatus;

(2) Circuit breakers, including testing by manual operation;

(3) Fuses, including ensuring the ratings of fuses are suitable for the service intended;

(4) All generators, motors, lighting fixtures, and circuit interrupting devices;

(5) Batteries including security of stowage;

(6) Electrical equipment, which operates as part of or in conjunction with a fire detection or alarm system installed onboard, to ensure operation in case of fire; and

(7) All emergency electrical systems, including any automatic systems if installed.

(g) Lifesaving. Verify that the vessel complies with applicable requirements contained in part 141 of this subchapter and examine the condition of lifesaving equipment and systems as follows:

(1) Verify that the vessel is equipped with the required number of lifejackets, work vests, and immersion suits.

- (2) Verify the serviceable condition of each lifejacket, work vest, and marine buoyant device.
- (3) Verify that each item of lifesaving equipment found to be defective has been repaired or replaced.
- (4) Verify that each lifejacket, other personal floatation device, or other lifesaving device found to be defective and incapable of repair was destroyed or removed.
- (5) Verify that each piece of expired lifesaving equipment has been replaced.
- (6) Examine each survival craft and launching appliance in accordance with subchapter W of this chapter.
- (7) Verify the servicing of each inflatable liferaft, inflatable buoyant apparatus, and inflatable lifejacket as required by subchapter W of this chapter.
- (8) Verify the proper servicing of each hydrostatic release unit, other than a disposable hydrostatic release unit, as required under subchapter W of this chapter.
- (9) Verify that the vessel's crew conducted abandon ship and man overboard drills under simulated emergency conditions.
- (h) Fire protection. Verify that the vessel complies with applicable requirements contained in part 142 of this subchapter, and examine or verify the fire protection equipment and systems as follows:

(1) Verify that the vessel is equipped with the required fire protection equipment for the vessel's route and service.

(2) Verify that the inspection, testing, and maintenance as required by § 142.240 of this subchapter are performed.

(3) Verify that the training requirements of § 142.245 of this subchapter are carried out.

(i) Towing gear. Verify that the vessel complies with the applicable requirements in parts 140 of this subchapter, and examine or verify the condition of, and where appropriate, the operation of the following:

(1) Deck machinery including controls, guards, alarms and safety features.

(2) Hawsers, wires, bridles, push gear, and related vessel fittings for damage or wear.

(3) Verify that the vessel complies with 33 CFR part 164, if applicable.

(j) Navigation equipment. Verify that the vessel complies with the applicable requirements in part 140 of this subchapter, and examine or verify the condition of and, where appropriate, the operation of the following:

(1) Navigation systems and equipment.

(2) Navigation lights.

(3) Navigation charts or maps appropriate to the area of operation and corrected up to date.

(4) Examine the operation of equipment and systems necessary to maintain visibility through the pilothouse windows.

(5) Verify that the vessel complies with 33 CFR part 164, if applicable.

(k) Sanitary examination. Examine the quarters, toilet and washing spaces, galleys, serving pantries, lockers, and similar spaces to ensure that they are clean and decently habitable.

(1) Unsafe practices. (1) Verify that all observed unsafe practices, fire hazards, and other hazardous situations are corrected, and that all required guards and protective devices are in satisfactory condition.

(2) Verify that bilges and other spaces are free of excessive accumulation of oil, trash, debris, or other matter that might create a fire hazard, clog bilge pumping systems, or block emergency escapes.

(m) Vessel personnel. Verify that the:

(1) Vessel is manned in accordance with the vessel's COI;



(2) Crew is maintaining vessel logs and records in accordance with applicable regulations and the TSMS appropriate to the vessel;

(3) Crew is complying with the crew safety and personnel health requirements of part 140 of this subchapter; and

(4) Crew has received training required by parts 140, 141, and 142 of this subchapter.

(n) Prevention of oil pollution. Examine the vessel to ensure compliance with the oil pollution prevention requirements in § 140.655 of this subchapter.

(o) Miscellaneous systems and equipment. Examine all items in the vessel's outfit, such as ground tackle, markings, and placards that are required to be carried in accordance with the regulations in this subchapter.

Subpart C—Drydock and Internal Structural Surveys

§ 137.300 Intervals for drydock and internal structural examinations.

(a) Regardless of the option chosen to obtain a COI, upon obtaining a COI each towing vessel must then undergo a drydock and internal structural examination at the following intervals:

(1) A vessel that is exposed to salt water more than 6 months in any 12-month period since the last examination

or initial certification must undergo a drydock and internal structural examination at least twice every 5 years, with not more than 36 months between examinations.

(2) A vessel that is exposed to salt water not more than 6 months in any 12-month period since the last examination or initial certification must undergo a drydock and internal structural examination at least once every 5 years.

(b) The cognizant OCMI may require additional examinations of the vessel whenever he or she discovers or suspects damage or deterioration to hull plating or structural members that may affect the seaworthiness or fitness for the route or service of a vessel. These examinations may include a drydock examination, including:

(1) An internal structural examination of any affected space of a vessel, including its fuel tanks;

(2) A removal of the vessel from service to assess the extent of the damage and to affect permanent repairs;  
or

(3) An adjustment of the drydock examination intervals to monitor the vessel's structural condition.

§ 137.302 Documenting compliance for the Coast Guard inspection option.

The managing owner or managing operator of a towing vessel, who has selected the Coast Guard inspection option, must make their vessel available for the Coast Guard to conduct the examinations required by this subpart in accordance with the intervals prescribed in § 137.300.

§ 137.305 Documenting compliance for the TSMS option.

The owner or managing operator of a towing vessel, who has selected the TSMS option, must document compliance with this subpart as follows:

(a) For vessels under the external survey program, provide objective evidence of compliance with § 137.310.

(b) For vessels under the internal survey program, provide objective evidence of compliance with § 137.315.

(c) Provide objective evidence that the vessel has undergone a drydock and internal structural examination, including options permitted in § 137.320 or § 137.322.

§ 137.310 External survey program.

(a) The owner or managing operator of a towing vessel that has selected the TSMS option and who has chosen to demonstrates compliance through an external survey program must:

(1) Have the vessel examined by a surveyor from a TPO at the intervals prescribed in § 137.300;

(2) Ensure the examination is conducted in accordance with § 137.325;

(3) Ensure the TSMS applicable to the vessel includes policies and procedures for complying with this section; and

(4) Make the applicable sections of the TSMS available to the surveyor.

(b) The drydock examination and internal structural examination must be documented in a report that contains the information required in § 137.135.

§ 137.315 Internal survey program.

(a) The owner or managing operator of a towing vessel that has selected the TSMS option and who has chosen to demonstrate vessel compliance with this subpart through an internal survey program must ensure that the TSMS applicable to the vessel includes:

(1) A survey program that meets the requirements contained in § 137.325;

(2) Qualifications of the personnel authorized to carry out a survey program that are comparable to the requirements of a surveyor from a TPO as described in § 139.130 of this subchapter;

(3) Procedures for documenting and reporting non-conformities and deficiencies;

(4) Procedures for reporting and correcting major non-conformities;

(5) The identification of a responsible person in management who has the authority to stop all vessel operations pending corrections, to oversee vessel compliance activities, and to track and verify the corrections of non-conformities and deficiencies; and

(6) Objective evidence that supports the completion of all elements of a vessel's drydock and internal structural examinations.

(b) The owner or managing operator must notify the TPO responsible for auditing the TSMS whenever activities related to credit drydocking or internal structural examinations are to be carried out prior to commencing the activities.

(c) The interval between examinations of each item may not exceed the applicable interval described in § 137.300.

(d) The owner or managing operator must notify the cognizant OCMI of the zone within which activities related to credit drydocking or internal structural examinations are to be carried out prior to commencing the activities.

§ 137.317 Coast Guard oversight of drydock and internal structural examination program for vessels under the TSMS option.

If the cognizant OCMI has reasonable cause to believe the program for the drydock examination and internal structural examination is deficient, he or she may:

(a) Require an audit of ongoing drydocking procedures and of documentation applicable to the vessel, in the presence of a representative of the cognizant OCMI;

(b) Increase the frequency of the audits;

(c) For vessels under the internal survey program, require an examination by a TPO;

(d) Require any other action within his or her authority that he or she considers appropriate; or

(e) For continued deficiencies, remove the vessel, owner, managing operator, or all three, from the TSMS option.

§ 137.320 Vessels holding a valid load line certificate.

A drydock and internal structural examination performed for a towing vessel to maintain a valid load line certificate issued in accordance with subchapter E of this chapter would count as an examination required under § 137.300.

§ 137.322 Classed vessels.

(a) A drydock and internal structural examination performed for a towing vessel to maintain class by the American Bureau of Shipping in accordance with their rules, as appropriate for the intended service and routes, would count as an examination required under § 137.300.

(b) A drydock and internal structural examination performed for a towing vessel to maintain class by a recognized classification society in accordance with their rules, as appropriate for the intended service and routes, would count as an examination required under § 137.300, provided the Coast Guard has accepted their applicable rules.

§ 137.325 General conduct of examination.

(a) When conducting an examination of a towing vessel as required by this subpart, the surveyor must determine whether any defect, deterioration, damage, or modifications of the hull and related structure and components may adversely affect the vessel's seaworthiness or fitness or suitability for its route or service.

(b) The examination must address the items in § 137.330 as applicable, and must include:

- (1) Access to internal spaces as appropriate;

(2) A visual examination of the external structure of the vessel to confirm that the condition is properly maintained; and

(3) A visual examination to confirm that unapproved modifications were not made to the vessel.

(c) The thoroughness and stringency of the examination will depend upon the condition of the vessel.

(d) The owner or managing operator must notify the cognizant OCMI when the condition of the vessel may create an unsafe condition.

(e) The cognizant OCMI may require the owner or managing operator to provide for the attendance of a surveyor or auditor from a TPO to assist with verifying the vessel's compliance with the requirements in this subpart.

§ 137.330 Scope of the drydock examination.

(a) This regulation applies to all towing vessels covered by this subchapter. The drydock examination must be conducted while the vessel is hauled out of the water or placed in a drydock or slipway. The Coast Guard inspector or surveyor conducting this examination must:

(1) Examine the exterior of the hull, including bottom, sides, headlog, and stern, and examine all appendages for damage, fractures, wastage, pitting, or improper repairs;



(2) Examine each tail shaft for bends, cracks, and damage, including the sleeves or other bearing contact surfaces on the tail shaft for wear. The tail shaft need not be removed for examination if these items can otherwise be properly evaluated;

(3) Examine the rudders for damage, the upper and lower bearings for wear, and the rudder stock for damage or wear. Rudders need not be removed for examination if these items can be otherwise properly evaluated. This also includes other underwater components of steering and propulsion mechanisms;

(4) Examine the propellers for cracks and damage;

(5) Examine the exterior components of the machinery cooling system for leaks, damage, or deterioration;

(6) Open and examine all sea chests, through-hull fittings, and strainers for damage, deterioration, or fouling; and

(7) On wooden vessels, pull fastenings as required for examination.

(b) An internal structural examination required by this part may be conducted while the vessel is afloat or while it is out of the water. It consists of a complete examination of the vessel's main strength members, including the major internal framing, the hull plating and

planking; voids; and ballast, cargo, and fuel oil tanks. Where the internal framing, plating, or planking of the vessel is concealed, sections of the lining, ceiling, or insulation may be removed or the parts otherwise probed or exposed to determine the condition of the hull structure. Fuel oil tanks need not be cleaned out and internally examined if the general condition of the tanks is determined to be satisfactory by an external examination.

§ 137.335 Underwater survey in lieu of drydocking.

(a) This section applies to all towing vessels subject to this subchapter. If a TSMS is applicable to the vessel, the TSMS may include policies and procedures for employing and documenting an underwater survey in lieu of drydocking (UWILD). A vessel is eligible for UWILD if the Coast Guard determines that:

(1) There is no obvious damage or defect in the hull adversely affecting the seaworthiness or fitness for the vessel's route or service;

(2) The vessel has been operated satisfactorily since the last drydocking;

(3) The vessel is less than 15 years of age;

(4) The vessel has a steel or aluminum hull; and

(5) The vessel is fitted with a hull protection system.

(b) The owner or managing operator must submit an application to the cognizant OCMI at least 90 days before the vessel's next required drydock examination. The application must include:

(1) The procedure for carrying out the underwater survey;

(2) The time and place of the underwater survey;

(3) The method used to accurately determine the diver's or the remotely operated vehicle's location relative to the hull;

(4) The means for examining all through-hull fittings and appurtenances;

(5) The condition of the vessel, including the anticipated draft of the vessel at the time of the survey;

(6) A description of the hull protection system; and

(7) The names and qualifications of all personnel involved in conducting the UWILD.

(c) If a vessel is 15 years of age or older, the Commandant may approve a UWILD at alternating intervals provided that:

(1) All provisions of paragraphs (a) and (b) of this section are complied with, except that the vessel does not need to be less than 15 years of age; and

(2) During the vessel's drydock examination preceding the underwater survey, a complete set of hull gauging was taken which indicated that the vessel was free from hull deterioration.

Part 138--TOWING SAFETY MANAGEMENT SYSTEM (TSMS)

Sec.

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Authority: 46 U.S.C. 3103, 3301, 3306, 3308, 3316, 8104, 8904; 33 CFR 1.05; DHS Delegation 0170.1.

Subpart A-General

§ 138.100 Purpose.

The purpose of this part is to prescribe requirements for owners or managing operators of towing vessels who adopt a Towing Safety Management System (TSMS) under this subchapter.

§ 138.115 Compliance.

Owners or managing operators selecting the TSMS option must obtain a TSMS certificate issued under § 138.305 at least 6 months before obtaining a Certificate of Inspection (COI) for any of their vessels covered by the TSMS certificate.

Subpart B—Towing Safety Management System (TSMS)

§ 138.205 Purpose of a TSMS.

(a) The purpose of a TSMS is to establish policies, procedures, and required documentation to ensure the owner or managing operator meets its established goals while ensuring continuous compliance with all regulatory requirements. The TSMS must contain a method to ensure all levels of the organization are working within the framework.

(b) A TSMS establishes and maintains:

(1) Management policies and procedures that serve as an operational protocol for all levels within management;

(2) Procedures to produce objective evidence that demonstrates compliance with the requirements of this subchapter;

(3) Procedures for an owner or managing operator to evaluate that they are following their own policies and procedures and complying with the requirements of this subchapter;

(4) Arrangements for a periodic evaluation by an independent third-party organization (TPO) to determine how well an owner or managing operator and their towing vessels are complying with their stated policies and procedures, and to verify that those policies and procedures comply with the requirements of this subchapter; and

(5) Procedures for correcting problems identified by management personnel and TPOs and facilitating continuous improvement.

§ 138.210 Objectives of a TSMS.

The TSMS, through policies, procedures, and documentation, must:

(a) Demonstrate management responsibility. The management must demonstrate that they implemented the policies and procedures as contained in the TSMS and the entire organization is adhering to their safety management program.

(b) Document management procedures. A TSMS must describe and document the owner or managing operator's organizational structure, responsibilities, procedures, and resources which ensure quality monitoring.

(c) Ensure document and data control. There must be clear identification of what types of documents and data are to be controlled, and who is responsible for controlling activities, including approval, issue, distribution, modification, removal of obsolete materials, and other related administrative functions.

(d) Provide a process and criteria for selection of third parties. Procedures for selection of TPOs must exist that include how third parties are evaluated, including selection criteria.

(e) Establish a system of recordkeeping. Records must be maintained to demonstrate effective implementation of the TSMS. This must include audit records, non-conformity reports and corrective actions, auditor qualifications, auditor training, and other records as considered necessary.

(f) Identify and meet training needs. The owner or operator must establish and maintain documented procedures for identifying training needs and providing training.

(g) Ensure adequate resources. Identify adequate resources and procedures necessary to comply with the TSMS.

§ 138.215 Functional requirements of a TSMS.

The functional requirements of a TSMS include:

(a) Policies and procedures to provide direction for the safe operation of towing vessels and protection of the marine environment in compliance with applicable U.S. law, including the Code of Federal Regulations, and, if on an international voyage, applicable international conventions to which the United States is a party;

(b) Defined levels of authority and lines of communication between shoreside and vessel personnel;

(c) Procedures for reporting accidents and non-conformities;

(d) Procedures to prepare for and respond to emergency situations by shoreside and vessel personnel;

(e) Procedures for verification of vessel compliance with this subchapter;

(f) Procedures for internal auditing of the TSMS, including shoreside and vessel operations;

(g) Procedures for external audits;

(h) Procedures for management review of internal and external audit reports and correction of non-conformities;  
and



(i) Procedures to evaluate recommendations made by management and other personnel.

§ 138.220 TSMS elements.

The TSMS must include the elements listed in paragraphs (a) through (d) of this section. If an element listed is not applicable to an owner or managing operator, appropriate justification must be documented and is subject to acceptance by the TPO.

(a) Administration and management organization. A policy must be in place that outlines the TSMS culture and how management intends to ensure compliance with this subpart. Supporting this policy, the following procedures and documentation must be included:

(1) Management organization--(i) Responsibilities. The management organization, authority, and responsibilities of individuals must be documented.

(ii) Designated person. Each owner or managing operator must designate in writing the shoreside person(s) responsible for ensuring the TSMS is implemented and continuously functions throughout management and the fleet. They must also designate the shoreside person(s) responsible for ensuring that the vessels are properly maintained and in operable condition, including those responsible for emergency assistance to each towing vessel.

(iii) Master authority. Each owner or managing operator must define the scope of the master's authority. The master's authority must provide for the ability to make final determinations on safe operations of the towing vessel. Specifically, it must provide the authority for the master to cease operation if an unsafe condition exists.

(2) Audits--(i) Procedures for conducting internal and external audits. The TSMS must contain procedures for audits in accordance with §§ 138.310 and 138.315.

(ii) Procedures for identifying and correcting non-conformities. The TSMS must contain procedures for any person to report non-conformities. The procedures must describe how an initial report should be made and the actions taken to follow-up and ensure appropriate resolution.

(b) Personnel. Policies must be in place that cover the owner or managing operator's approach to managing personnel, including, but not limited to, employment, training, and health and safety of personnel. Supporting these policies, the following procedures and documentation must be included:

(1) Employment procedures. The TSMS must contain procedures related to the employment of individuals.

Procedures must be in place to ensure adequate qualifications of personnel, to include background checks, compliance with drug and alcohol standards, and that personnel are able to perform required tasks.

(2) Training of personnel. The TSMS must contain a policy related to the training of personnel, including:

(i) New-hire orientation;

(ii) Duties associated with the execution of the TSMS;

- (iii) Execution of operational duties;
- (iv) Execution of emergency procedures;
- (v) Occupational health;
- (vi) Crew safety; and
- (vii) Training required by this Subchapter.

(c) Verification of vessel compliance. Policies must be in place that cover the owner or managing operator's approach for ensuring vessel compliance, including, but not limited to, policies on maintenance and survey, safety, the environment, security, and emergency preparedness.

Supporting these policies, the following procedures and documentation must be included:

(1) Maintenance and survey. Procedures outlining the owner or managing operator's survey regime must specify all maintenance, examination, and survey requirements,

including the minimum qualifications of persons assigned to carry out required surveys the owner or managing operator is using the internal examination program. Applicable documentation must be maintained for all activities for a period of 5 years.

(2) Safety, environment, and security. Procedures must be in place to ensure safety of property, the environment, and personnel. This must include procedures to ensure the selection of the appropriate vessel, including adequate maneuverability and horsepower, appropriate rigging and towing gear, proper management of the navigational watch, and compliance with applicable security measures.

(d) Compliance with this subchapter. Procedures and documentation must be in place to ensure that each towing vessel complies with the operational, equipment, and personnel requirements of this subchapter.

§ 138.225 Existing safety management systems (SMSs).

(a) A safety management system (SMS) which is fully compliant with the International Safety Management (ISM) Code requirements, implemented in 33 CFR part 96, will be deemed in compliance with TSMS-related requirements in this subchapter.

(b) Other existing SMSs may be considered for acceptance as meeting the TSMS requirements of this part.

The Coast Guard may:

- (1) Accept such system in full;
- (2) Require modifications to the system as a condition of acceptance; or
- (3) Reject the system.

(c) An owner or managing operator who seeks to meet TSMS requirements using provisions in paragraph (a) or (b) of this section must submit documentation to the Coast Guard based on the initial audit and one full audit cycle of at least 3 years.

(d) The Coast Guard may elect to inspect equipment and records, including:

- (1) Contents of the SMS;
- (2) Objective evidence of internal and external audits;
- (3) Objective evidence that non-conformities were identified and corrected; and
- (4) Objective evidence of vessel compliance with applicable regulations.

Subpart C—Documenting Compliance

§ 138.305 TSMS certificate.

(a) The owner or managing operator will be issued a TSMS certificate by a TPO when his or her organization is deemed in compliance with the TSMS requirements. It should be kept on file at the owner or managing operator's shoreside office and available for review, at the request of the Coast Guard.

(b) A TSMS certificate is valid for 5 years from the date of issue, unless suspended, revoked or rescinded as provided in paragraphs (d) and (e) of this section.

(c) The vessel owner or managing operator must maintain a list of vessels currently covered by each TSMS certificate and must provide it to the Coast Guard upon request.

(d) A TSMS certificate may be suspended or revoked by the Coast Guard at any time for non-compliance with the requirements of this part.

(e) The TPO that issued the TSMS certificate may rescind the certificate for non-compliance with the requirements of this part.

(f) A copy of the TSMS certificate must be maintained on each towing vessel that is covered by the TSMS certificate and on file at the owner or managing operator's shoreside office.

§ 138.310 Internal audits for a TSMS certificate.

(a) Internal management audits must be conducted annually, within 3 months of the anniversary date of the TSMS certificate, to ensure the owner or managing operator is effectively implementing all elements of their TSMS.

(b) The internal management audit must ensure that management has implemented the TSMS throughout all levels of the organization, including audits of all the owner or managing operator's towing vessels to which a TSMS applies to ensure implementation at the operational level.

(c) The results of internal audits must be documented and maintained for a period of 5 years and made available to the Coast Guard upon request.

(d) Internal auditors:

(1) Must have knowledge of the management, its SMS, and the standards contained in this subchapter;

(2) Must have completed an ANSI/ISO/ASQ Q9001-2000 or ISO 9001:2008(E) (incorporated by reference, see § 136.112 of this subchapter) internal auditor/assessor course or Coast Guard-recognized equivalent;

(3) May not be the designated person, or any other person, within the organization that is responsible for development or implementation of the TSMS; and

(4) Must be independent of the procedures being audited, unless this is impracticable due to the size and the nature of the organization.

§ 138.315 External audits for a TSMS certificate.

External audits for obtaining and renewing a TSMS certificate are conducted through a TPO and must include both management and vessels as follows:

(a) Management audits. (1) Prior to the issuance of an owner or managing operator's initial TSMS certificate, or subsequent renewals, an external management audit must be conducted by an auditor from a TPO.

(2) A mid-period external management audit must be conducted between the 27th and 33rd month of the certificate's period of validity.

(b) Vessel audits. (1) An external audit must be conducted prior to the issuance of the initial COI for vessels subject to an owner or managing operator's TSMS that have been owned or operated for 6 or more months prior to receiving the initial COI.

(2) An external audit must be conducted no later than 6 months after the issuance of the initial COI for vessels subject to the owner or managing operator's TSMS that have been owned or operated for fewer than 6 months prior to receiving the initial COI.



(3) An external audit of all vessels covered by a TSMS certificate must be conducted during the 5-year period of validity of the TSMS certificate. The vessels must be selected randomly and distributed as evenly as possible.

(4) External audits may include the use of objective evidence which may be available at the owner or managing operator's corporate office. Some portions of this audit require visiting each vessel at some point during the 5-year period of validity of the TSMS certificate.

(c) Documentation. The results of the external audit must be documented and maintained for a period of 5 years and made available to the Coast Guard or the external auditor upon request.

#### Subpart D—Audits

##### § 138.400 General.

Management and vessels are subject to internal and external audits to assess compliance with TSMS and the vessel standards requirements of this subchapter.

##### § 138.405 Conduct of internal audits.

(a) Internal audits are conducted by, or on behalf of, the management and may be performed by a designated employee or by contracted individual(s) who conduct the audit as if an employee of the owner or managing operator.

(b) Internal audits are not necessarily conducted as one event; they can be taken in segments over time.

(c) Internal audits must be of sufficient depth and breadth to ensure the owner or managing operator established adequate procedures and documentation to comply with the TSMS requirements of this part, that the TSMS was implemented throughout all levels of the organization, and that the owner or managing operator's vessels comply with this subchapter and the TSMS.

(d) The auditor must have the authority to examine documentation, question personnel, examine vessel equipment, witness system testing, and observe personnel training, including drills, as necessary to verify TSMS effectiveness.

§ 138.410 Conduct of external audits.

(a) External audits must be conducted by an auditor from a TPO and cover all elements of the TSMS requirements of this subchapter, but may be conducted on a sampling basis of each of those TSMS elements.

(b) External audits must be of sufficient depth and breadth to ensure the owner or operating manager effectively implemented its TSMS throughout all levels of the organization, including onboard its vessels.

(c) The auditor must be provided access to examine any requested documentation, question personnel, examine vessel equipment, witness system testing, and observe personnel training, including drills, as necessary to verify TSMS effectiveness.

(d) The auditor may broaden the scope of the audit if:

(1) The TSMS is incomplete or not effectively implemented;

(2) Conditions found are not consistent with the records; or

(3) Unsafe conditions are identified.

(e) The auditor may verify compliance with vessel standards and TSMS requirements through a review of objective evidence such as checklists, invoices, and reports, and may conduct a visual sampling onboard the vessels to determine whether or not the conditions onboard the vessel are consistent with the records reviewed.

(f) If an auditor identifies a major non-conformity during the course of the external audit, then the auditor must notify the local Officer in Charge, Marine Inspection (OCMI) within 24 hours and the owner or managing operator's designated representative in accordance with the TSMS applicable to the vessel.

Subpart E—Coast Guard or Organizational Oversight and  
Review

§ 138.500 Notification prior to audit.

(a) The owner or managing operator of a towing vessel must notify the local OCMI at least 72 hours prior to an external audit being conducted under this part.

(b) The Coast Guard may require that a Coast Guard representative accompany the auditor during part, or all, of an external audit.

(c) The Coast Guard may conduct a separate audit of the owner or managing operator or its towing vessels, at its discretion.

§ 138.505 Submittal of external audit results.

(a) Submission of external management audits. The results of an external management audit as required by § 138.315 must be submitted to the Towing Vessel National Center of Expertise within 30 days of audit completion by the TPO conducting the external audit. The mailing address for the Coast Guard Towing Vessel National Center of Expertise is 504 Broadway Street, Suite 101, Paducah, Kentucky 42001.

(b) Submission of external vessel audits. The results of any external vessel audits required by § 138.315

must be submitted to the cognizant OCMI within 30 days of audit completion by the TPO conducting the external audit.

(c) Electronic submissions. The results of external audits required by this section may be submitted electronically so long as the means used allows the Coast Guard to reliably verify the person making the submission and the authenticity of the records submitted. For those seeking to submit external audit records to the Coast Guard electronically, the TSMS must address the means to be used to make these electronic submissions.

§ 138.510 Required attendance.

(a) The TPO and the owner or managing operator may be required to explain or otherwise demonstrate areas of the TSMS to the Coast Guard if there is evidence that a TSMS, for which a TSMS certificate was issued, is not in compliance with the provisions of this part. The Coast Guard may require a third party's attendance at the vessel or the office of the owner or managing operator for this purpose.

(b) The Coast Guard will not bear any of the costs for a third party's attendance at the vessel or the office of the owner or managing operator when complying with this provision.

PART 139--THIRD-PARTY ORGANIZATIONS

Sec.

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Authority: 46 U.S.C. 3103, 3301, 3306, 3308, 3316, 8104, 8904; 33 CFR 1.05; DHS Delegation 0170.1.

§ 139.100 Purpose.

(a) This part states the requirements applicable to third-party organizations (TPOs) that conduct audits and surveys for towing vessels as required by this subchapter.

(b) The Commandant delegates to the Towing Vessel National Center of Expertise (TVNCOE) the authority to carry out the functions of this part associated with approval of TPOs, including revocation and suspension of approval.

§ 139.110 Organizations not subject to further approval.

(a) A recognized classification society, which has satisfied the requirements in 46 CFR 8.230, meets the

requirements of a TPO for the purposes of this part and may perform the work as a third-party auditor.

(b) An authorized classification society, which has been authorized under 46 CFR part 8, subpart C or D, meets the requirements of a TPO for the purposes of this part and may perform the work as a third-party surveyor.

(c) The organizations qualifying as TPOs under paragraph (a) or (b) of this section must ensure that employees providing services under this part hold proper qualifications for the particular type of service being performed.

§ 139.115 General.

(a) The Coast Guard approves TPOs to carry out functions related to ensuring that towing vessels comply with provisions of this subchapter. Organizations may be approved to:

(1) Conduct audits of a Towing Safety Management System (TSMS), and the vessels to which the TSMS applies, to verify compliance with the applicable provisions of this subchapter;

(2) Issue TSMS certificates to the owner or managing operator who is in compliance with part 138 of this subchapter;

(3) Conduct surveys of towing vessels to verify compliance with the applicable provisions of this subchapter; and

(4) Issue survey reports detailing the results of surveys, carried out in compliance with part 137 of this subchapter.

(b) An organization seeking approval under this part must provide objective evidence to the Coast Guard that its program:

(1) Is independent of the owner or managing operator and vessels that it audits or surveys;

(2) Operates within a quality management system acceptable to the Coast Guard;

(3) Ensures its auditors and surveyors are qualified and maintain continued competence;

(4) Demonstrates the ability to carry out the responsibilities of approval; and

(5) Meets all other requirements of this part.

(c) A list of TPOs will be maintained by the Coast Guard, and made available upon request.

§ 139.120 Application for approval as a TPO.

An organization, which may include a business entity or an association, desiring to be approved as a TPO under this part must submit a written request to the Towing



Vessel National Center of Expertise, 504 Broadway St Suite 101, Paducah, KY 42001. The organization must provide the following information:

(a) A description of the organization, including the ownership, structure, and organizational components.

(b) A general description of the clients being served or intended to be served.

(c) A description of the types of work performed by the organization or by the principals of the organization in the past, noting the amount and extent of such work performed within the previous 3 years.

(d) Objective evidence of an internal quality system based on ANSI/ISO/ASQ Q9001-2000 (incorporated by reference, see § 136.112 of this subchapter) or an equivalent quality standard.

(e) Organization procedures and supporting documentation that describe processes used to perform an audit and records to show system effectiveness.

(f) Copies of checklists, forms, or other tools to be used as guides or for recording the results of audits and/or surveys.

(g) Organization procedures for appeals and grievances.

(h) The organization's code of ethics applicable to the organization and its auditors and/or surveyors.

(i) A list of the organization's auditors and/or surveyors who meet the requirements of § 139.130. This list must include the experience, background, and qualifications for each auditor and/or surveyor.

(j) A description of the organization's means of assuring continued competence of its personnel.

(k) The organization's procedures for terminating or removing auditors and/or surveyors.

(l) A description of the organization's means of assuring the availability of its personnel to meet the needs of the towing companies for conducting audits and surveys within the intervals established in this subchapter.

(m) A description of the organization's apprentice or associate program for auditors and/or surveyors.

(n) A statement that the Coast Guard may inspect the organization's facilities and records and may accompany auditors and/or surveyors in the performance of duties related to the requested approval.

(o) Disclosure of any potential conflicts of interest.

(p) A statement that the organization, its managers, and employees engaged in audits and/or surveys are not, and will not be involved in any activities which could result in a conflict of interest or otherwise limit the independent judgment of the auditor and/or surveyor or organization.

(q) Any additional information that the applicant deems pertinent.

§ 139.125 Approval of TPOs.

(a) The Commandant delegates to the Towing Vessel National Center of Expertise (TVNCOE) the authority to carry out the review and approval described in this section, and the related authority to suspend and revoke approval.

(b) The Coast Guard will review the request and notify the organization in writing whether their request is granted.

(c) If a request for approval is denied, the Coast Guard will inform the organization of the reasons for the denial and will describe what corrections are required for an approval to be granted.

(d) An approval for a TPO that meets the requirements of this part will expire:

(1) Five years after the last day of the month in which it is granted;

(2) When the TPO gives notice that it will no longer offer towing vessel audit and/or survey services;

(3) When revoked by the Coast Guard in accordance with § 139.150; or

(4) On the date of a change in ownership, as defined in § 136.110, of the TPO for which approval was granted.

§ 139.130 Qualifications of auditors and surveyors.

(a) A prospective auditor or surveyor must have the skills and experience necessary to assess compliance with all requirements of this subchapter.

(b) Auditors must meet the following qualifications:

(1) High school diploma or equivalent.

(2) Four years of working on towing vessels or other relevant marine experience such as Coast Guard marine inspector, licensed mariner, military personnel with relevant maritime experience, or marine surveyor.

(3) Successful completion of an ANSI/ISO/ASQ Q9001-2000 or ISO 9001:2008(E) (incorporated by reference, see § 136.112 of this subchapter) lead auditor/assessor course or Coast Guard recognized equivalent.

(4) Successful completion of a training course for the auditing of a TSMS.

(5) Audit experience, as demonstrated by:

(i) Documented experience in auditing the ISM Code or the American Waterways Operators Responsible Carrier Program, consisting of at least two management audits and six vessel audits within the past 5 years; or

(ii) Successful completion of an auditor apprenticeship, consisting of at least one management audit and three vessel audits under the direction of a lead auditor.

(c) Surveyors must meet the following qualifications:

(1) High school diploma or equivalent.

(2) At least one of the following:

(i) Four years of experience working on towing vessels as master, mate (pilot), or engineer; or

(ii) Other relevant marine experience such as Coast Guard marine inspector, military personnel with relevant maritime experience, marine surveyor, accredited marine surveyor, experience on vessels of similar operating and physical characteristics.

§ 139.135 Addition and removal of auditors and surveyors.

(a) A TPO must maintain a list of current and former auditors and surveyors.

(b) To add an auditor or surveyor, the TPO must submit that person's experience, background, and qualifications to the TVNCOE.

(c) The TVNCOE must be notified when an auditor or surveyor is removed from employment.

§ 139.140 Renewal of TPO approval.

(a) To renew an approval, a TPO must submit a written request to the TVNCOE at the address listed in § 139.120.

(b) For the request to be approved, the Coast Guard must be satisfied that the applicant continues to fully meet approval criteria.

(c) The Coast Guard may request any additional information necessary to properly evaluate the request.

§ 139.145 Suspension of approval.

(a) The Coast Guard may suspend the approval of a TPO approved under this part whenever the Coast Guard determines that the TPO does not comply with the provisions of this part. The Coast Guard must:

(1) Notify the TPO in writing of the intention to suspend the approval;

(2) Provide the details of the TPO's failure to comply with this part; and

(3) Advise the TPO of the time period, not to exceed 60 days, within which the TPO must correct its failure to

comply with this part. If the TPO fails to correct its failure to comply with this part within the time period allowed, the approval will be suspended.

(b) The Coast Guard may also partially suspend the approval of a TPO, using the process described in paragraph (a) of this section. This may include suspension of an individual auditor or surveyor or suspension of the authority of the TPO to carry out specific duties whenever the Coast Guard determines that the provisions of this part are not complied with.

§ 139.150 Revocation of approval.

(a) The Coast Guard may revoke the approval of a TPO if the organization has demonstrated a pattern or history of:

- (1) Failure to comply with this part;
- (2) Substantial deviations from the terms of the approval granted under this part; or
- (3) Failures, including ethical violations, conflicts of interest, or inadequate performance, that indicate to the Coast Guard that the TPO is no longer capable of carrying out its duties as a TPO.

(b) If the Coast Guard seeks to revoke the approval of a TPO, it must:

(1) Notify the TPO in writing of the intention to revoke the approval;

(2) Provide the details of the TPO's demonstrated pattern or history of actions described in paragraph (a) of this section; and

(3) Advise the TPO that it may appeal this decision to the Coast Guard in accordance with the provisions of 46 CFR subpart 1.03.

§ 139.155 Appeals of suspension or revocation of approval.

Anyone directly affected by a decision to suspend or revoke an approval granted under this part may appeal the decision to the Coast Guard in accordance with the provisions of 46 CFR subpart 1.03.

§ 139.160 Coast Guard oversight activities.

(a) The Coast Guard will provide notice to the TPO 48 hours in advance of any site visit, unless the visit is in response to a complaint or other evidence of regulatory non-compliance. During the visit, the Coast Guard may:

(1) Inspect a TPO's records;

(2) Conduct interviews of auditors or surveyors to aid in the evaluation of the organization; and

(3) Observe audits or surveys.



(b) The Coast Guard may require that the owner or managing operator make available a copy of the TSMS upon request.

(c) The Coast Guard may require a revision of a previously approved TSMS if it is determined that requirements of this subchapter are not met.

§ 139.165 Documentation.

(a) Each TPO must retain the results of each survey or audit conducted under its approval, including:

- (1) The names of the auditors and/or surveyors;
- (2) The results of each audit or survey conducted;

and

(3) Documentation showing continuing actions relative to an audit or survey, such as resolution of deficiencies and non-conformities.

(b) Each TPO must also retain the results of audits of their organization conducted by the Coast Guard.

(c) Records required by this part must be retained for a period of 5 years.

PART 140--OPERATIONS

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Authority: 46 U.S.C. 3103, 3301, 3306, 3308, 3316,  
8104, 8904; 33 CFR 1.05; DHS Delegation 0170.1.

Subpart A—General

§ 140.100 Purpose.

This part contains the health, safety, and operational requirements for towing vessels and the crewmembers serving onboard them.

§ 140.105 Applicability and delayed implementation for existing vessels.

This part applies to all towing vessels subject to this subchapter.

(a) With the exception § 140.500, which has a later implementation date, an existing towing vessel must comply

with the requirements in this part no later than either July 20, 2018 or the date the vessel obtains a Certificate of Inspection (COI), whichever date is earlier.

(b) The delayed implementation provisions in paragraph (a) of this section do not apply to a new towing vessel.

#### Subpart B—General Operational Safety

##### § 140.205 General vessel operation.

(a) A vessel must be operated in accordance with applicable laws and regulations and in such a manner as to afford protection against hazards to life, property, and the environment.

(b) Towing vessels with a Towing Safety Management System (TSMS) must be operated in accordance with the TSMS applicable to the vessel.

(c) Vessels must be manned in accordance with the COI. Manning requirements are contained in part 15 of this chapter.

(d) Each crewmember that is required to hold a Merchant Mariner Credential (MMC) must have the credential on board and available for examination at all times when the vessel is operating.

(e) All individuals who are not required to hold an MMC permitted onboard the vessel must have and present on

request a valid personal identification that meets the requirements set forth in 33 CFR 101.515.

§ 140.210 Responsibilities of the master and crew.

(a) The safety of the towing vessel is the responsibility of the master and includes:

- (1) Adherence to the provisions of the COI;
- (2) Compliance with the applicable provisions of this subchapter;
- (3) Compliance with the TSMS, if one is applicable to the vessel; and
- (4) Supervision of all persons onboard in carrying out their assigned duties.

(b) If the master or officer in charge of a navigational watch believes it is unsafe for the vessel to proceed, that an operation endangers the vessel or crew, or that an unsafe condition exists, he or she must ensure that adequate corrective action is taken and must not proceed until it is safe to do so.

(c) Nothing in this subpart may be construed in a manner which limits the master or officer in charge of a navigational watch, at his or her own responsibility, from diverting from the route prescribed in the COI or taking such steps as deemed necessary and prudent to assist vessels in distress or for other emergency conditions.

(d) It is the responsibility of the crew to:

(1) Adhere to the provisions of the COI;

(2) Comply with the applicable provisions of this subchapter;

(3) Comply with the TSMS, if one is applicable to the vessel;

(4) Ensure that the master or officer in charge of a navigational watch is made aware of all known aspects of the condition of the vessel, including:

(i) Those vessels being pushed, pulled, or hauled alongside; and

(ii) Equipment and other accessories used for pushing, pulling, or hauling alongside other vessels.

(5) Minimize any distraction from the operation of the vessel or performance of duty; and

(6) Report unsafe conditions to the master or officer in charge of a navigational watch and take effective action to prevent accidents.

Subpart C—[Reserved]

Subpart D—Crew Safety

§ 140.400 Personnel records.

(a) The master of each towing vessel must keep an accurate list of crewmembers and their assigned positions and responsibilities aboard the vessel.

(b) The master must keep an accurate list of individuals to be carried as persons in addition to the crew and any passengers.

(c) The date and time that a navigation watchstander, including master, officer in charge of a navigational watch, and lookout assumes a watch and is relieved of a watch must be recorded in the towing vessel record (TVR), official logbook, or in accordance with the TSMS applicable to the vessel. If an engineering watch is maintained, comparable records documenting the engineering watch are required.

§ 140.405 Emergency duties and duty stations.

(a) Crewmembers must meet the requirements in §§ 15.405 and 15.1105 of this chapter, as appropriate.

(b) Any towing vessel with alternating watches (shift work) or overnight accommodations must identify the duties and duty stations of each person onboard during an emergency, including:

- (1) Responding to fires and flooding;
- (2) Responding to emergencies that necessitate abandoning the vessel;
- (3) Launching survival craft;
- (4) Taking action during heavy weather;
- (5) Taking action in the event of a person overboard;

- (6) Taking action relative to the tow;
- (7) Taking action in the event of failure of propulsion, steering, or control system;
- (8) Managing individuals onboard who are not crewmembers;
- (9) Managing any other event or condition which poses a threat to life, property, or the environment; and
- (10) Responding to other special duties essential to addressing emergencies as determined by the TSMS applicable to the vessel, if a TSMS is used.

(c) The emergency duties and duty stations required by this section must be posted at each operating station and in a conspicuous location in a space commonly visited by crewmembers. If posting is impractical, such as in an open boat, they may be kept onboard in a location readily available to the crew.

§ 140.410 Safety orientation.

(a) Personnel must meet the requirements in §§ 15.405 and 15.1105 of this chapter, as appropriate.

(b) Prior to getting underway for the first time on a particular towing vessel, each crewmember must receive a safety orientation on:

- (1) His or her duties in an emergency;



(2) The location, operation, and use of lifesaving equipment;

(3) Prevention of falls overboard;

(4) Personal safety measures;

(5) The location, operation, and use of Personal Protective Equipment;

(6) Emergency egress procedures;

(7) The use and operation of watertight and weathertight closures;

(8) Responsibilities to provide assistance to individuals that are not crewmembers;

(9) How to respond to emergencies relative to the tow; and

(10) Awareness of, and expected response to, any other hazards inherent to the operation of the towing vessel which may pose a threat to life, property, or the environment.

(c) The safety orientation provided to crewmembers who received a safety orientation on another vessel may be modified to cover only those areas unique to the other vessel on which service will occur.

(d) Safety orientations and other crew training must be documented in the TVR, official logbook, or in

accordance with the TSMS applicable to the vessel. The entry must include:

- (1) The date of the safety orientation or training;
- (2) A general description of the safety orientation or training topics;
- (3) The name(s) and signature(s) of individual(s) providing the orientation or training; and
- (4) The name(s) of the individual(s) receiving the safety orientation or training.

§ 140.415 Orientation for individuals that are not crewmembers.

Individuals, who are not crewmembers, on board a towing vessel must receive a safety orientation prior to getting underway or as soon as practicable thereafter, to include:

- (a) The location, operation, and use of lifesaving equipment;
- (b) Emergency procedures;
- (c) Methods to notify crewmembers in the event of an emergency; and
- (d) Prevention of falls overboard.

§ 140.420 Emergency drills and instruction.

- (a) Master's responsibilities. The master of a towing vessel must ensure that drills are conducted and

instructions are given to ensure that all crewmembers are capable of performing the duties expected of them during emergencies. This includes abandoning the vessel, recovering persons from the water, responding to onboard fires and flooding, or responding to other threats to life, property, or the environment.

(b) Nature of drills. Each drill must, as far as practicable, be conducted as if there was an actual emergency.

(c) Annual instruction for each crew member. Unless otherwise stated, each crewmember must receive the instruction required by this section annually.

(d) Instructions and drills required. The following instruction and drills are required:

(1) Response to fires, as required by § 142.245 of this subchapter;

(2) Launching of a skiff, if listed as an item of emergency equipment to abandon ship or recover a person-overboard;

(3) Instruction on the use of davit-launched liferafts, if installed.

(4) If a rescue boat is installed, instruction on how it must be launched, with its assigned crew aboard, and

maneuvered in the water as if during an actual man-overboard situation.

(5) Credentialed mariners holding an officer endorsement do not require instruction in accordance with paragraphs (d) (1), (3), and (4) of this section.

(e) Alternative forms of instruction. (1)

Instruction as required by this section may be conducted via an electronic format followed by a discussion and demonstration by a competent individual. This instruction may occur either on board or off the vessel but must include the equipment that is the subject of the instruction.

(2) Instruction as required by this section may be performed in accordance with the TSMS applicable to the vessel, provided that it meets the minimum requirements of this section.

(f) Location of drills, full crew participation, and use of equipment. As far as practicable, drills must take place on board the vessel. They must include:

(1) Participation by all crewmembers; and

(2) Actual use of, or realistic simulation of the use of, emergency equipment.

(g) Recordkeeping. Records of drills and instruction must be maintained in the TVR, official logbook, or in

accordance with the TSMS applicable to the vessel. The record must include:

- (1) The date of the drill and instruction;
- (2) A description of the drill scenario and instruction topics;
- (3) The personnel involved.

§ 140.425 Fall overboard prevention.

(a) The owner or managing operator of a towing vessel must establish procedures to address fall overboard prevention and recovery of persons in the water, including, but not limited to:

- (1) Personal protective equipment;
- (2) Safely working on the tow;
- (3) Safety while line handling;
- (4) Safely moving between the vessel and a tow, pier, structure, or other vessel; and
- (5) Use of retrieval equipment.

(b) The owner, managing operator, or master must ensure that all persons on board comply with the policies and procedures in this section.

§ 140.430 Wearing of work vests.

(a) Personnel dispatched from the vessel or that are working in an area on the exterior of the vessel without rails and guards must wear a lifejacket meeting

requirements in 46 CFR 141.340, an immersion suit meeting requirements in 46 CFR 141.350, or a work vest approved by the Commandant under 46 CFR subpart 160.053. When worn at night, the work vest must be equipped with a light that meets the requirements of 46 CFR 141.340(g)(1). Work vests may not be substituted for the lifejackets required by 46 CFR part 141.

(b) Each storage container containing a work vest must be marked "WORK VEST".

§ 140.435 First aid equipment.

Each towing vessel must be equipped with an industrial type first aid cabinet or kit, appropriate to the size of the crew and operating conditions. Each towing vessel operating on oceans, coastwise, or Great Lakes routes must have a means to take blood pressure readings, splint broken bones, and apply large bandages for serious wounds.

Subpart E—Safety and Health

§ 140.500 General.

(a) No later than July 22, 2019, the owner or managing operator must implement a health and safety plan. The health and safety plan must document compliance with this part and include recordkeeping procedures.

(b) The owner, managing operator, or master must ensure that all persons on board a towing vessel comply with the health and safety plan.

§ 140.505 General health and safety requirements.

(a) The owner or managing operator must implement procedures for reporting unsafe conditions and must have records of the activities conducted under this section. The owner or managing operator must maintain records of health and safety incidents that occur on board the vessel, including any medical records associated with the incidents. Upon request, the owner or managing operator must provide crewmembers with incident reports and the crewmember's own associated medical records.

(b) All vessel equipment must be used in accordance with the manufacturer's recommended practice and in a manner that minimizes risk of injury or death. This includes machinery, deck machinery, towing gear, ladders, embarkation devices, cranes, portable tools, and safety equipment.

(c) All machinery and equipment that is not in proper working order (including missing or malfunctioning guards or safety devices) must be removed; made safe through marking, tagging, or covering; or otherwise made unusable.

(d) Personal Protective Equipment (PPE). (1)

Appropriate Personal Protective Equipment (PPE) must be made available and on hand for all personnel engaged in an activity that requires the use of PPE.

(2) PPE must be suitable for the vessel's intended service; meet the standards of 29 CFR part 1910, subpart I; and be used, cleaned, maintained, and repaired in accordance with manufacturer's requirements.

(3) All individuals must wear PPE appropriate to the activity being performed;

(4) All personnel engaged in an activity must be trained in the proper use, limitations, and care of the PPE specified by this subpart;

(e) The vessel, including crew's quarters and the galley, must be kept in a sanitary condition.

§ 140.510 Identification and mitigation of health and safety hazards.

(a) The owner or managing operator must implement procedures to identify and mitigate health and safety hazards, including but not limited to:

(1) Tools and equipment, including deck machinery, rigging, welding and cutting, hand tools, ladders, and abrasive wheel machinery found on board the vessel;

(2) Slips, trips, and falls;



- (3) Working aloft;
- (4) Hazardous materials;
- (5) Confined space entry;
- (6) Blood-borne pathogens and other biological hazards;
- (7) Electrical;
- (8) Noise;
- (9) Falls overboard;
- (10) Vessel embarkation and disembarkation (including pilot transfers);
- (11) Towing gear, including winches, capstans, wires, hawsers and other related equipment;
- (12) Personal hygiene;
- (13) Sanitation and safe food handling; and
- (14) Potable water supply.

(b) As far as practicable, the owner or managing operator must implement other types of safety control measures before relying on Personal Protective Equipment. These controls may include administrative, engineering, source modification, substitution, process change or controls, isolation, ventilation, or other controls.

§ 140.515 Training requirements.

(a) All crewmembers must be provided with health and safety information and training that includes:

(1) Content and procedures of the owner or managing operator's health and safety plan;

(2) Procedures for reporting unsafe conditions;

(3) Proper selection and use of PPE appropriate to the vessel operation;

(4) Safe use of equipment including deck machinery, rigging, welding and cutting, hand tools, ladders, and abrasive wheel machinery found onboard the vessel;

(5) Hazard communication and cargo knowledge;

(6) Safe use and storage of hazardous materials and chemicals;

(7) Confined space entry;

(8) Respiratory protection; and

(9) Lockout/Tagout procedures.

(b) Individuals, other than crewmembers, must be provided with sufficient information or training on hazards relevant to their potential exposure on or around the vessel.

(c) Crewmember training required by this section must be conducted as soon as practicable, but not later than 5 days after employment.

(d) Refresher training must be repeated annually and may be conducted over time in modules covering specific topics. Refresher training may be less comprehensive,

provided that the information presented is sufficient to provide employees with continued understanding of workplace hazards. The refresher training of persons subject to this subpart must include the information and training prescribed in this section.

(e) The owner, managing operator, or master must determine the appropriate training and information to provide to each individual permitted on the vessel who is not a crewmember, relative to the expected risk exposure of the individual.

(f) All training required in this section must be documented in owner or managing operator's records.

#### Subpart F—Vessel Operational Safety

##### § 140.600 Applicability.

This subpart applies to all towing vessels unless otherwise specified. Certain vessels remain subject to the navigation safety regulations in 33 CFR part 164.

##### § 140.605 Vessel stability.

(a) Prior to getting underway, and at all other times necessary to ensure the safety of the vessel, the master or officer in charge of a navigational watch must determine whether the vessel complies with all stability requirements in the vessel's trim and stability book, stability letter, COI, and Load Line Certificate, as applicable.

(b) A towing vessel must be maintained and operated so the watertight integrity and stability of the vessel are not compromised.

§ 140.610 Hatches and other openings.

(a) All towing vessels must be operated in a manner that minimizes the risk of down-flooding and progressive flooding.

(b) The master must ensure that all hatches, doors, and other openings designed to be watertight or weather-tight function properly.

(c) The master or officer in charge of a navigational watch must ensure all hatches and openings of the hull and deck are kept tightly closed except:

(1) When access is needed through the opening for transit;

(2) When operating on rivers with a tow, if the master determines the safety of the vessel is not compromised; or

(3) When operating on lakes, bays, and sounds, without a tow during calm weather, and only if the master determines that the safety of the vessel is not compromised.

(d) Where installed, all watertight doors in watertight bulkheads must be closed during the operation of

the vessel, unless they are being used for transit between compartments; and

(e) When downstreaming, all exterior openings at the main deck level must be closed.

(f) Decks and bulkheads designed to be watertight or weathertight must be maintained in that condition.

§ 140.615 Examinations and tests.

(a) This section applies to a towing vessel not subject to 33 CFR 164.80.

(b) Prior to getting underway, the master or officer in charge of a navigational watch of the vessel must examine and test the steering gear, signaling whistle, propulsion control, towing gear, navigation lights, navigation equipment, and communication systems of the vessel. This examination and testing does not need to be conducted more than once in any 24-hour period.

(c) The results of the examination and testing must be recorded in the TVR, official logbook, or in accordance with the TSMS applicable to the vessel.

§ 140.620 Navigational safety equipment.

(a) This section applies to a towing vessel not subject to the requirements of 33 CFR 164.82.

(b) The owner, managing operator, or master of each towing vessel must maintain the required navigational-

safety equipment in a fully-functioning, operational condition.

(c) Navigational safety equipment such as radar, gyrocompass, echo depth-sounding or other sounding device, automatic dependent surveillance equipment, or navigational lighting that fails during a voyage must be repaired at the earliest practicable time. The owner, managing operator, or master must consider the state of the equipment (along with such factors as weather, visibility, traffic, and the dictates of good seamanship) when deciding whether it is safe for the vessel to proceed.

(d) The failure and subsequent repair or replacement of navigational safety equipment must be recorded. The record must be made in the TVR, official logbook, or in accordance with the TSMS applicable to the vessel.

§ 140.625 Navigation underway.

(a) At all times, the movement of a towing vessel and its tow must be under the direction and control of a master or mate (pilot) properly licensed under subchapter B of this chapter.

(b) The master or officer in charge of a navigational watch must operate the vessel in accordance with the conditions and restrictions stated on the COI and the TSMS applicable to the vessel.

Note to § 140.625. Certain towing vessels subject to § 140.625 are also subject to the requirements of 33 CFR 164.78.

§ 140.630 Lookout.

(a) Throughout the trip or voyage the master and officer in charge of the navigational watch must assess the requirement for a lookout, consistent with 33 CFR 83.05. A lookout in addition to the master or mate (pilot) should be added when necessary to:

(1) Maintain a state of vigilance with regard to any significant change in the operational environment;

(2) Assess the situation and the risk of collision/allision;

(3) Anticipate stranding and other dangers to navigation; and

(4) Detect any other potential hazards to safe navigation.

(b) In determining the requirement for a lookout, the officer in charge of the navigational watch must take full account of relevant factors including, but not limited to: state of weather, visibility, traffic density, proximity of dangers to navigation, and the attention necessary when navigating in areas of increased vessel traffic.

§ 140.635 Navigation assessment.

(a) The officer in charge of a navigational watch must conduct a navigation assessment for the intended route and operations prior to getting underway. The navigation assessment must incorporate the requirements of pilothouse resource management of § 140.640, assess operational risks, and anticipate and manage workload demands. At a minimum, this assessment must consider:

(1) The velocity and direction of currents in the area being transited;

(2) Water depth, river stage, and tidal state along the route and at mooring location;

(3) Prevailing visibility and weather conditions and changes anticipated along the intended route;

(4) Density (actual and anticipated) of marine traffic;

(5) The operational status of pilothouse instrumentation and controls, to include alarms, communication systems, variation and deviation errors of the compass, and any known nonconformities or deficiencies;

(6) Air draft relative to bridges and overhead obstructions taking tide and river stage into consideration;

(7) Horizontal clearance, to include bridge transits;



- (8) Lock transits;
  - (9) Navigation hazards such as logs, wrecks or other obstructions in the water;
  - (10) Any broadcast notice to mariners, safety or security zones or special navigation areas;
  - (11) Configuration of the vessel and tow, including handling characteristics, field of vision from the pilothouse, and activities taking place onboard;
  - (12) The knowledge, qualifications, and limitations of crewmembers who are assigned as members on watch and the experience and familiarity of crewmembers with the towing vessels particulars and equipment; and
  - (13) Any special conditions not covered above that impact the safety of navigation.
- (b) The officer in charge of a navigational watch must keep the navigation assessment up-to-date to reflect changes in conditions and circumstances. This includes updates during the voyage or trip as necessary. At each change of the navigational watch, the oncoming officer in charge of the navigational watch must review the current navigation assessment for necessary changes.
- (c) The officer in charge of a navigational watch must ensure that the navigation assessment and any updates

are communicated to other members of the navigational watch.

(d) A navigation assessment entry must be recorded in the TVR, official log, or in accordance with the TSMS applicable to the vessel. The entry must include the date and time of the assessment, the name of the individual making the assessment, and the starting and ending points of the voyage or trip that the assessment covers.

Note to § 140.635. Certain towing vessels subject to § 140.635 are also subject to the voyage planning requirements of 33 CFR 164.80.

§ 140.640 Pilothouse resource management.

(a) The officer in charge of a navigational watch must:

(1) Ensure that other members of the navigational watch have a working knowledge of the navigation assessment required by § 140.635, and understand the chain of command, the decision-making process, and the fact that information sharing is critical to the safety of the vessel.

(2) Ensure that the navigation assessment required by § 140.635 is complete, updated, communicated and available throughout the trip.

(3) Ensure that watch change procedures incorporate all items listed in paragraph (a)(1) of this section.

(4) Take actions (to include delaying watch change or pausing the voyage) if there is reasonable cause to believe that an oncoming watchstander is not immediately capable of carrying out his or her duties effectively.

(5) Maintain situational awareness and minimize distractions.

(b) Prior to assuming duties as officer in charge of a navigational watch, a person must:

(1) Complete the navigation assessment required by § 140.635;

(2) Verify the operational condition of the towing vessel; and

(3) Verify that there are adequate personnel available to assume the watch.

(c) If at any time the officer in charge of a navigational watch is to be relieved when a maneuver or other action to avoid any hazard is taking place, the relief of that officer in charge of a navigational watch must be deferred until such action has been completed.

§ 140.645 Navigation safety training.

(a) Prior to assuming duties related to the safe operation of a towing vessel, each crewmember must receive training to ensure that they are familiar with:

(1) Watchstanding terms and definitions;

- (2) Duties of a lookout;
- (3) Communication with other watchstanders;
- (4) Change of watch procedures;
- (5) Procedures for reporting other vessels or objects; and
- (6) Watchstanding safety.

(b) Crewmember training must be recorded in the TVR, official logbook, or in accordance with the TSMS applicable to the vessel.

(c) Credentialed mariners holding Able Seaman or officer endorsements will be deemed to have met the training requirements in this section.

§ 140.650 Operational readiness of lifesaving and fire suppression and detection equipment.

The owner, managing operator, or master of a towing vessel must ensure that the vessel's lifesaving and fire suppression and detection equipment complies with the applicable requirements of parts 141 and 142 of this subchapter and is in good working order.

§ 140.655 Prevention of oil and garbage pollution.

(a) Each towing vessel must be operated in compliance with:

(1) Applicable sections of the Federal Water Pollution Control Act, including section 311 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1321);

(2) Applicable sections of the Act to Prevent Pollution from Ships (33 U.S.C. 1901 et seq.); and

(3) Parts 151, 155, and 156, of 33 CFR, as applicable.

(b) Each towing vessel must be capable of preventing all oil spills from reaching the water during transfers by:

(1) Pre-closing the scuppers/freeing ports, if the towing vessel is so equipped;

(2) Using fixed or portable containment of sufficient capacity to contain the most likely spill, if 33 CFR 155.320 does not apply; or

(3) Pre-deploying sorbent material on the deck around vents and fills.

(c) No person may intentionally drain oil or hazardous material into the bilge of a towing vessel from any source. For purposes of this section, "oil" has the same meaning as "oil" defined in 33 U.S.C. 1321.

§ 140.660 Vessel security.

Each towing vessel must be operated in compliance with:

(a) The Maritime Transportation Security Act of 2002 (46 U.S.C. Chapter 701); and

(b) 33 CFR parts 101 and 104, as applicable.

§ 140.665 Inspection and testing required when making alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions.

(a) The inspections and issuance of certificates required by this section must be conducted in accordance with the provisions of NFPA 306 (incorporated by reference, see § 136.112 of this subchapter) before alterations, repairs, or other operations involving riveting, welding, burning, or other fire producing actions may be made aboard a vessel.

(b) Until an inspection has been made to determine that such operation can be undertaken with safety, no alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions must be made:

(1) Within or on the boundaries of cargo tanks which have been used to carry combustible liquid or chemicals in bulk;

(2) Within or on the boundaries of fuel tanks; or,

(3) To pipe lines, heating coils, pumps, fittings, or other appurtenances connected to such cargo or fuel tanks.

(c) Such inspections must be made and evidenced as follows:

(1) In ports or places in the United States or its territories and possessions the inspection must be made by a marine chemist certificated by the National Fire Protection Association. However, if the services of such certified marine chemist are not reasonably available, the Officer in Charge, Marine Inspection (OCMI), upon the recommendation of the vessel owner and his or her contractor or their representative, must select a person who, in the case of an individual vessel, must be authorized to make such inspection. If the inspection indicated that such operations can be undertaken with safety, a certificate setting forth the fact in writing and qualified as may be required, must be issued by the certified marine chemist or the authorized person before the work is started. Such qualifications must include any requirements as may be deemed necessary to maintain the safe conditions in the spaces certified throughout the operation and must include such additional tests and certifications as considered required. Such qualifications and requirements must include precautions necessary to eliminate or minimize hazards that may be present from protective coatings or residues from cargoes.

(2) When not in such a port or place, and a marine chemist or such person authorized by the OCMI, is not reasonably available, the inspection must be made by the master or person in charge and a proper entry must be made in the vessel's logbook.

(d) The master or person in charge must secure copies of certificates issued by the certified marine chemist or such person authorized by the OCMI. The master or person in charge must maintain a safe condition on the vessel by full observance of all qualifications and requirements listed by the marine chemist or person authorized by the OCMI in the certificate.

§ 140.670 Use of auto pilot.

Except for towing vessels in compliance with requirements in 33 CFR 164.13(d), when an automatic pilot is used in areas of high traffic density, conditions of restricted visibility, or any other hazardous navigational situations, the master must ensure that:

(a) It is possible to immediately establish manual control of the ship's steering;

(b) A competent person is ready at all times to take over steering control; and



(c) The changeover from automatic to manual steering and vice versa is made by, or under, the supervision of the officer in charge of the navigational watch.

#### Subpart G—Navigation and Communication Equipment

##### § 140.700 Applicability.

This subpart applies to all towing vessels unless otherwise specified. Certain towing vessels are also subject to the navigation safety regulations in 33 CFR part 164.

##### § 140.705 Charts and nautical publications.

(a) This section applies to a towing vessel not subject to the requirements of 33 CFR 164.72.

(b) A towing vessel must carry adequate and up-to-date charts, maps, and nautical publications for the intended voyage, including:

(1) Charts, including electronic charts acceptable to the Coast Guard, of appropriate scale to make safe navigation possible. Towing vessels operating on the Western Rivers must have maps of appropriate scale issued by the Army Corps of Engineers or a river authority;

(2) "U.S. Coast Pilot" or similar publication;

(3) Coast Guard light list; and

(4) Towing vessels that operate the Western Rivers must have river stage(s) or Water Surface Elevations as

appropriate to the trip or route, as published by the U.S. Army Corps of Engineers or a river authority, must be available to the person in charge of the navigation watch.

(c) Extracts or copies from the publications listed in paragraph (b) of this section may be carried, so long as they are applicable to the route.

§ 140.710 Marine radar.

Requirements for marine radar are set forth in 33 CFR 164.72.

§ 140.715 Communications equipment.

(a) Towing vessels must meet the communications requirements of 33 CFR part 26 and 33 CFR 164.72, as applicable.

(b) Towing vessels not subject to the provisions of 33 CFR part 26 or 33 CFR 164.72 must have a Very High Frequency-Frequency Modulated (VHF-FM) radio installed and capable of monitoring VHF-FM Channels 13 and 16, except when transmitting or receiving traffic on other VHF-FM channels, when participating in a Vessel Traffic Service (VTS), or when monitoring a channel of a VTS. The VHF-FM radio must be installed at each operating station and connected to a functioning battery backup.

(c) All towing vessels must have at least one properly operating handheld VHF-FM radio in addition to the radios otherwise required.

§ 140.720 Navigation lights, shapes, and sound signals.

Each towing vessel must be equipped with navigation lights, shapes, and sound signals in accordance with the International Regulations for Prevention of Collisions at Sea (COLREGS) or 33 CFR part 84 as appropriate to its area of operation.

§ 140.725 Additional navigation equipment.

Towing vessels must be equipped with the following equipment, as applicable to the area of operation:

- (a) Fathometer (except Western Rivers).
- (b) Search light, controllable from the vessel's operating station and capable of illuminating objects at a distance of at least two times the length of the tow.
- (c) Electronic position-fixing device, satisfactory for the area in which the vessel operates, if the towing vessel engages in towing seaward of the navigable waters of the U.S. or more than 3 nautical miles from shore on the Great Lakes.
- (d) Illuminated magnetic compass or an illuminated swing-meter (Western Rivers vessels only). The compass or swing-meter must be readable from each operating station.

Note to § 140.725. Certain towing vessels subject to § 140.725 are also subject to the requirements of 33 CFR 164.72 and Automatic Identification System requirements of 33 CFR 164.46.

#### Subpart H—Towing Safety

##### § 140.800 Applicability.

This subpart applies to all towing vessels unless otherwise specified. Certain vessels are also subject to the navigation safety regulations in 33 CFR parts 163 and 164.

##### § 140.801 Towing gear.

The owner, managing operator, master or officer in charge of a navigational watch of a towing vessel must ensure the following:

(a) The strength of each component used for securing the towing vessel to the tow and for making up the tow is adequate for its intended service.

(b) The size, material, and condition of towlines, lines, wires, push gear, cables, and other rigging used for making up a tow or securing the towing vessel to a tow must be appropriate for:

- (1) The horsepower or bollard pull of the vessel;
- (2) The static loads and dynamic loads expected during the intended service;

(3) The environmental conditions expected during the intended service; and

(4) The likelihood of mechanical damage.

(c) Emergency procedures related to the tow have been developed and appropriate training provided to the crew for carrying out their emergency duties.

§ 140.805 Towing safety.

Prior to getting underway, and giving due consideration to the prevailing and expected conditions of the trip or voyage, the officer in charge of the navigational watch for a towing vessel must ensure that:

(a) The barges, vessels, or objects making up the tow are properly configured and secured;

(b) Equipment, cargo, and industrial components on board the tow are properly secured and made ready for transit;

(c) The towing vessel is safely and securely made up to the tow; and

(d) The towing vessel has appropriate horsepower or bollard pull and is capable of safely maneuvering the tow.

§ 140.820 Recordkeeping for towing gear.

(a) The results of the inspections required by 33 CFR 164.76 must be documented in the TVR, official logbook, or in accordance with the TSMS applicable to the vessel.

(b) A record of the type, size, and service of each towline, face wire, and spring line, used to make the towing vessel fast to her tow, must be available to the Coast Guard or third-party auditor for review. The following minimum information is required in the record: the dates when examinations were performed, the identification of each item of towing gear examined, and the name(s) of the person(s) conducting the examinations.

#### Subpart I—Vessel Records

##### § 140.900 Marine casualty reporting.

Each towing vessel must comply with the requirements of part 4 of this chapter for reporting marine casualties and retaining voyage records.

##### § 140.905 Official logbooks.

(a) A towing vessel of the United States, except one on a voyage from a port in the United States to a port in Canada, is required by 46 U.S.C. 11301 to have an official logbook if the vessel is:

(1) On a voyage from a port in the United States to a foreign port; or

(2) Of at least 100 gross tons and on a voyage between a port in the United States on the Atlantic Ocean and one on the Pacific Ocean.

(b) The Coast Guard furnishes, without fee, to masters of vessels of the United States, the official logbook as Form CG-706B or CG-706C, depending on the number of persons employed as crew. The first several pages of this logbook list various acts of Congress governing logbooks and the entries required in them.

(c) When a voyage is completed, or after a specified time has elapsed, the master must file the official logbook containing required entries with the cognizant OCMI at or nearest the port where the vessel may be.

§ 140.910 Towing vessel record or record specified by TSMS.

(a) This section applies to a towing vessel other than a vessel operating only in a limited geographic area or a vessel required by § 140.905 to maintain an official logbook.

(b) A towing vessel subject to this section must maintain a TVR or in accordance with the TSMS applicable to the towing vessel.

(c) The TVR must include a chronological record of events as required by this subchapter. The TVR may be electronic or paper.

(d) Except as required by §§ 140.900 and 140.905, records do not need to be filed with the Coast Guard, but

must be kept available for review by the Coast Guard upon request. Records, unless required to be maintained for a longer period by statute or other federal regulation, must be retained for at least 1 year after the date of the latest entry.

§ 140.915 Items to be recorded.

(a) The following list of items must be recorded in the TVR, official logbook, or in accordance with the TSMS applicable to the vessel:

- (1) Personnel records, in accordance with § 140.400;
- (2) Safety orientation, in accordance with § 140.410;
- (3) Record of drills and instruction, in accordance with § 140.420;
- (4) Examinations and tests, in accordance with § 140.615;
- (5) Operative navigational safety equipment, in accordance with § 140.620;
- (6) Navigation assessment, in accordance with § 140.635;
- (7) Navigation safety training, in accordance with § 140.645;
- (8) Oil residue discharges and disposals, in accordance with § 140.655;



(9) Record of inspection of towing gear, in accordance with § 140.820; and

(10) Fire-detection and fixed fire-extinguishing, in accordance with § 142.240.

(b) For the purposes of this subchapter, if items are recorded electronically in a TVR or other record as specified by the TSMS applicable to the towing vessel, these electronic entries must include the date and time of entry and name of the person making the entry. If after an entry has been made, someone responsible for entries determines there is an error in an entry, any entries to correct the error must include the date and time of entry and name of the person making the correction and must preserve a record of the original entry being corrected.

Note to § 140.915. For towing vessels subject to 46 U.S.C. 11301, there are statutory requirements in that U.S. Code section for additional items that must be entered in the official logbook. Regarding requirements outside this subchapter, such as requirements in 33 CFR 151.25 to make entries in an oil record book, § 140.915 does not change those requirements.

#### Subpart J—Penalties

##### § 140.1000 Statutory penalties.

Violations of the provisions of this subchapter will subject the violator to the applicable penalty provisions of Subtitle II of Title 46, and Title 18, United States Code.

§ 140.1005 Suspension and revocation.

An individual is subject to proceedings under the provisions of 46 U.S.C. 7703 and 7704, and part 5 of this chapter with respect to suspension or revocation of a license, certificate, document, or credential if the individual holds a license, certificate of registry, merchant mariner document, or merchant mariner credential and:

- (a) Commits an act of misconduct, negligence or incompetence;
- (b) Uses or is addicted to a dangerous drug; or
- (c) Violates or fails to comply with this subchapter or any other law or regulation intended to promote marine safety; or
- (d) Becomes a security risk, as described in 46 U.S.C. 7703.

Part 141--LIFESAVING

Sec.

Subpart A-General

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Authority: 46 U.S.C. 3103, 3301, 3306, 3308, 3316, 8104, 8904; 33 CFR 1.05; DHS Delegation 0170.1.

#### Subpart A—General

##### § 141.100 Purpose.

This part contains requirements for lifesaving equipment, arrangements, systems, and procedures on towing vessels.

##### § 141.105 Applicability and delayed implementation for existing vessels.

(a) This part applies to all towing vessels subject to this subchapter.

(1) An existing towing vessel must comply with the requirements in this part no later than either July 20, 2018 or the date the vessel obtains a Certificate of Inspection (COI), whichever date is earlier.

(2) The delayed implementation provisions in paragraph (a)(1) of this section do not apply to a new towing vessel.

(b) A towing vessel on an international voyage, subject to SOLAS (incorporated by reference, see § 136.112 of this subchapter), must meet the applicable requirements in subchapter W of this chapter.

(c) Towing vessels in compliance with SOLAS Chapter III will be deemed in compliance with this part.

Subpart B—General Requirements for Towing Vessels

§ 141.200 General provisions.

(a) Unless otherwise specified, all lifesaving equipment must be approved by the Commandant under the approval series specified in each section. Lifesaving equipment for personal use which is not required by this part need not be approved by the Commandant.

(b) A listing of approved equipment and materials may be found at <https://cgmix.uscg.mil/equipment>. Each cognizant Officer in Charge, Marine Inspection (OCMI) may be contacted for information concerning approved equipment and materials.

(c) Equipment requirements are based on the area in which a towing vessel is operating, not the route for which it is certificated. However, the towing vessel must be

equipped per the requirements of its certificated route at the time of certification.

§ 141.225 Alternate arrangements or equipment.

(a) Alternate arrangements or equipment to comply with this part may be approved in accordance with § 136.115 of this subchapter.

(b) If a Towing Safety Management System (TSMS) is applicable to the towing vessel, alternative means for complying with §§ 141.340, 141.350, and 141.360 may be approved by a third-party organization (TPO) and documented in the TSMS applicable to the vessel.

(c) The Coast Guard may approve a novel lifesaving appliance or arrangement as an equivalent if it has performance characteristics at least equivalent to the appliance or arrangement required under this subchapter, and if it has been evaluated and tested under IMO Resolution A.520(13) (incorporated by reference, see § 136.112 of this subchapter). Requests for evaluation of novel lifesaving appliances must be sent to the Commandant (CG-ENG).

(d) The cognizant OCMI may require a towing vessel to carry specialized or additional lifesaving equipment if:

(1) He or she determines that the conditions of the voyage render the requirements of this part inadequate; or

(2) The towing vessel is operated in globally remote areas or severe environments not covered under this part. Such areas may include, but are not limited to, polar regions, remote islands, areas of extreme weather, and other remote areas where timely emergency assistance cannot be anticipated.

§ 141.230 Readiness.

The master must ensure that all lifesaving equipment is properly maintained and ready for use at all times.

§ 141.235 Inspection, testing, and maintenance.

(a) All lifesaving equipment must be tested and maintained in accordance with the minimum requirements of § 199.190 of this chapter, as applicable, and the vessel's TSMS, if the vessel has a TSMS.

(b) Inspections and tests of lifesaving equipment must be recorded in the TVR, official logbook, or in accordance with any TSMS applicable to the vessel. The following minimum information is required:

(1) The dates when inspections and tests were performed, the number or other identification of each unit inspected and tested, the results of the inspections and tests, and the name of the crewmember, surveyor or auditor and any others conducting the inspections and tests; and

(2) Receipts and other records documenting these inspections and tests must be retained for at least 1 year after the expiration of the COI and made available upon request.

§ 141.240 Requirements for training crews.

Training requirements are contained in part 140 of this subchapter.

Subpart C—Lifesaving Requirements for Towing Vessels

§ 141.305 Survival craft requirements for towing vessels.

(a) General purpose. Survival craft provide a means for survival when evacuation from the towing vessel is necessary. The craft and related equipment should be selected so as to provide for the basic needs of the crew, such as shelter from life threatening elements, until rescue resources are expected to arrive, taking into account the scope and nature of the towing vessel's operations.

(b) Functional requirements. A towing vessel's survival craft must meet the functional requirements of paragraphs (b) (1) through (5) of this section. Functional requirements describe the objectives of the regulation. Survival craft must:

- (1) Be readily accessible;

(2) Have an aggregate capacity sufficient to accommodate the total number of individuals onboard, as specified in paragraph (c) of this section;

(3) Provide a means for sheltering its complement appropriate to the route;

(4) Provide minimum equipment for survival if recovery time is expected to be greater than 24 hours; and

(5) Be marked so that an individual not familiar with the operation of the specific survival craft has sufficient guidance to utilize the craft for its intended use.

(c) Compliance options. A towing vessel must meet the applicable functional requirements. Compliance with the functional requirements of paragraph (b) of this section may be met by one of these two options:

(1) A towing vessel that meets the prescriptive requirements of paragraph (d) of this section will have complied with the functional requirements; or

(2) If an owner or managing operator chooses to meet the functional requirement through means other than as specified in paragraph (c)(1) of this section, the means must be accepted by the cognizant OCMI or, if the vessel has a TSMS, then by a TPO and, in the latter case, documented in the TSMS applicable to the vessel. The design, testing, and examination scheme for meeting these



functional requirements must be included as part of the TSMS applicable to the vessel.

(d) Prescriptive requirements. (1) Except as provided in paragraphs (d)(2) through (4) of this section, each towing vessel must carry the survival craft specified in Table 141.305 of this section, as appropriate for the towing vessel, in an aggregate capacity to accommodate the total number of individuals onboard.

Table 141.305 - Survival Craft

Equipment (approval series)	AREA OF OPERATION						
	Limited Geographic Area or Protected Waters	Rivers	Great Lakes and lakes, bays, and sounds as defined in § 136.110		Coastwise and Ltd. Coastwise		Oceans
			≤ 3 miles from shore	> 3 miles from shore	≤ 3 miles from shore	> 3 miles from shore	
COLD WATER OPERATION							
Inflatable Buoyant Apparatus (160.010)	None <sup>1</sup>	100% <sup>2</sup>	100% <sup>2</sup>	—	100% <sup>2</sup>	—	—
Inflatable Liferaft with SOLAS B Pack (160.151)	None <sup>1</sup>	—	—	100%	—	100%	—
Inflatable Liferaft with SOLAS A Pack (160.151)	None <sup>1</sup>	—	—	—	—	—	100%
WARM WATER OPERATION							
							—
Rigid Buoyant Apparatus (160.010)	None <sup>1</sup>	100% <sup>2</sup>	100% <sup>2</sup>	100% <sup>2</sup>	100% <sup>2</sup>	—	—

Inflatable Liferaft with SOLAS B Pack (160.151)	None <sup>1</sup>	-	-	-	-	100% <sup>3</sup>	-
Inflatable Liferaft with SOLAS A Pack (160.151)	None <sup>1</sup>	-	-	-	-	-	100%

1 No survival craft are required unless deemed necessary by the cognizant OCMI or a TSMS applicable to the towing vessel.

2 A skiff that meets requirements in § 141.330(a) through (f) may be substituted for all or part of required equipment.

3 Inflatable buoyant apparatus (approval series 160.010) may be accepted or substituted if the vessel carries a 406 MHz Cat 1 emergency position indicating radio beacon (EPIRB) meeting 47 CFR part 80.

(2) The following approved survival craft may be substituted for survival craft required by Table 141.305 of this section:

(i) A lifeboat approved under approval series 160.135 may be substituted for any survival craft required by this section, provided it is arranged and equipped in accordance with part 199 of this chapter.

(ii) An inflatable liferaft approved under approval series 160.051 or 160.151, may be substituted for an inflatable buoyant apparatus or rigid buoyant apparatus.

(iii) An inflatable buoyant apparatus approved under approval series 160.010 may be substituted for a rigid buoyant apparatus.

(iv) A life float approved under approval series 160.027 may be substituted for a rigid buoyant apparatus.

(3) Unless it is determined to be necessary by the cognizant OCMI under § 141.225, or a TSMS applicable to the towing vessel, each towing vessel that operates solely on rivers need not carry survival craft if:

(i) It carries a 406 MHz Cat 1 EPIRB meeting 47 CFR part 80;

(ii) It is designed for pushing ahead and has a TSMS that contains procedures for evacuating crewmembers onto the tow or other safe location; or

(iii) It operates within 1 mile of shore.

(4) A towing vessel which is not required by this part to carry survival craft may carry a non-approved survival craft as excess equipment, provided that it is maintained in good working condition and maintained according to the manufacturer's instructions.

§ 141.310 Stowage of survival craft.

Survival craft must be stowed in accordance with the requirements of § 199.130 of this chapter, as far as is practicable on existing towing vessels.

§ 141.315 Marking of survival craft and stowage locations.

Survival craft and stowage locations must be marked in accordance with the requirements of §§ 199.176 and 199.178 of this chapter.

§ 141.320 Inflatable survival craft placards.

Every towing vessel equipped with an inflatable survival craft must have, in conspicuous places near each inflatable survival craft, approved placards or other posted instructions for launching and inflating inflatable survival craft.

§ 141.325 Survival craft equipment.

(a) Each item of survival craft equipment must be of good quality, effective for the purpose it is intended to serve, and secured to the craft.

(b) Each towing vessel carrying a lifeboat must carry equipment in accordance with § 199.175 of this chapter.

(c) Each life float and rigid buoyant apparatus must be fitted with a lifeline, pendants, a painter, and floating electric water light approved under approval series 161.010.

§ 141.330 Skiffs as survival craft.

A skiff may be substituted for all or part of the approved survival craft for towing vessels that do not operate more than 3 miles from shore. A skiff used as a survival craft does not require Coast Guard approval but must:

(a) Be capable of being launched within 5 minutes under all circumstances;

(b) Be of suitable size for all persons on board the towing vessel;

(c) Not exceed the loading specified on the capacity plate required by 33 CFR 183.23;

(d) Not contain modifications affecting the buoyancy or structure of the skiff;

(e) Be of suitable design for the vessel's intended service; and

(f) Be marked in accordance with §§ 199.176 and 199.178 of this chapter.

§ 141.340 Lifejackets.

(a) Each towing vessel must carry at least one appropriately-sized lifejacket, approved under approval series 160.002, 160.005, 160.055, 160.155, or 160.176, for each person on board.

(b) For towing vessels with berthing aboard, a sufficient number of additional lifejackets must be carried so that a lifejacket is immediately available for persons at each normally manned watch station.

(c) Where alternative means are used to meet the requirements of this section, as permitted by § 141.225, there must be at least one lifejacket for each person onboard. Any TSMS applicable to the towing vessel must specify the number and location of lifejackets in such a manner as to facilitate immediate accessibility at normally occupied spaces including, but not limited to, accommodation spaces and watch stations.

(d) Lifejackets must be readily accessible.

(e) If the towing vessel carries inflatable lifejackets they must be of similar design to each other and have the same mode of operation.

(f) Each lifejacket must be marked:

(1) In block capital letters with the name of the vessel; and

(2) With Type I retro-reflective material approved under approval series 164.018. The arrangement of the retro-reflective material must meet IMO Resolution A.658(16) (incorporated by reference, see § 136.112 of this subchapter).

(g) Lifejackets must have the following attachments and fittings:

(1) Each lifejacket must have a lifejacket light approved under approval series 161.012 or 161.112 securely attached to the front shoulder area of the lifejacket.

(2) Each lifejacket must have a whistle firmly secured by a cord to the lifejacket.

(h) Stowage positions for lifejackets stowed in a berthing space or stateroom and all lifejacket containers must be marked in block capital letters and numbers with the minimum quantity, identity, and, if sizes other than adult or universal sizes are used on the vessel, the size of the lifejackets stowed inside the container. The



equipment may be identified in words or with the appropriate symbol from IMO Resolution A.760(18) (incorporated by reference, see § 136.112 of this subchapter).

§ 141.350 Immersion suits.

(a) Except as provided in paragraph (a)(4) of this section, each towing vessel operating north of lat. 32° N or south of lat. 32° S must carry the number of immersion suits as prescribed in this paragraph (a):

(1) Each towing vessel operating in those regions must carry at least one appropriate-size immersion suit, approved under approval series 160.171, for each person onboard.

(2) In addition to the immersion suits required under paragraph (a)(1) of this section, each watch station, work station, and industrial work site must have enough immersion suits to equal the number of persons normally on watch in, or assigned to, the station or site at one time. However, an immersion suit is not required at a station or site for a person whose cabin or berthing area (and the immersion suits stowed in that location) is readily accessible to the station or site.

(3) Where alternative means are used to meet the requirements of this section, as permitted by § 141.225,

there must be at least one immersion suit of the appropriate size for each person onboard. Any TSMS applicable to the towing vessel must specify the number and location of immersion suits in such a manner as to facilitate immediate accessibility at normally occupied spaces including, but not limited to, accommodation spaces and watch stations.

(4) A towing vessel operating on rivers or in a limited geographic area is not required to carry immersion suits.

(b) Immersion suits carried on towing vessels must meet the requirements of § 199.70(c) and (d) of this chapter.

§ 141.360 Lifebuoys.

(a) A towing vessel must carry lifebuoys as follows:

(1) A towing vessel less than 26 feet length must carry a minimum of one lifebuoy of not less than 510 millimeters (20 inches) in diameter.

(2) A towing vessel of at least 26 feet, but less than 79 feet, in length must carry a minimum of two lifebuoys located on opposite sides of the vessel where personnel are normally present. Lifebuoys must be at least 610 millimeters (24 inches) in diameter.

(3) A towing vessel 79 feet or more in length must carry four lifebuoys, with one lifebuoy located on each side of the operating station. Lifebuoys must be at least 610 millimeters (24 inches) in diameter.

(4) Where alternative means are used to meet the requirements of this section, as permitted by § 141.225, any TSMS applicable to the towing vessel must specify the number and location of lifebuoys in such a manner as to facilitate rapid deployment of lifebuoys from exposed decks, including the pilot house.

(b) Each lifebuoy on a towing vessel must:

(1) Be approved under approval series 160.050 or 160.150;

(2) Be capable of being rapidly cast loose;

(3) Not be permanently secured to the vessel in any way;

(4) Be marked in block capital letters with the name of the vessel; and

(5) Be orange in color, if on a vessel on an oceans or coastwise route.

(c) Lifebuoys must have the following attachments and fittings:

(1) At least one lifebuoy must have a lifeline, secured around the body of the lifebuoy. If more than one

lifebuoy is carried, at least one must not have a lifeline attached. Each lifeline on a lifebuoy must:

- (i) Be buoyant;
- (ii) Be of at least 18.3 meters (60 feet) in length;
- (iii) Be non-kinking;
- (iv) Have a diameter of at least 7.9 millimeters (5/16 inch);
- (v) Have a breaking strength of at least 5 kilonewtons (1,124 pounds); and
- (vi) Be of a dark color if synthetic, or of a type certified to be resistant to deterioration from ultraviolet light.

(2) At least two lifebuoys on a towing vessel greater than 26 feet must be fitted with a floating electric water light approved under approval series 161.010 or 161.110, unless the towing vessel is limited to daytime operation, in which case no floating electric water light is required.

(3) If a towing vessel carries only one lifebuoy, the lifebuoy must be fitted with a floating electric water light approved under approval series 161.010 or 160.110, unless the towing vessel is limited to daytime operation, in which case no floating electric water light is required. The water light must be attached by the lanyard with a corrosion-resistant clip to allow the water light to be

quickly disconnected from the lifebuoy. The clip must have a strength of at least 22.7 kilograms (50 pounds).

(4) Each lifebuoy with a floating electric water light must have a lanyard of at least 910 millimeters (3 feet) in length, but not more than 1,830 millimeters (6 feet), securing the water light around the body of the lifebuoy.

§ 141.370 Miscellaneous life saving requirements for towing vessels.

Miscellaneous lifesaving requirements are summarized in Table 141.370 of this section. Equipment requirements are based on the area in which a towing vessel is operating, not the route for which it is certificated.

Table 141.370 - Miscellaneous Lifesaving Equipment

Equipment (46 CFR section)	AREA OF OPERATION						
	Limited Geographic Area	Rivers	Great Lakes and lakes, bays, and sounds as defined in § 136.110		Coastwise and Ltd. Coastwise		Oceans
			≤ 3 miles from shore	> 3 miles from shore	≤ 3 miles from shore	> 3 miles from shore	
Visual Distress Signals (\$ 141.375)	3 day and 3 night	3 day and 3 night	3 day and 3 night	6 day and 6 night	3 day and 3 night	6 day and 6 night	6 day and 6 night
EPIRBs (\$ 141.380)	-	-	-	1 <sup>1</sup>	1-	1	1
Line Throwing Appliances (\$ 141.385)	-	-	-	-	-	1-	1

<sup>1</sup> Great Lakes service only.

§ 141.375 Visual distress signals.

(a) Carriage requirement. A towing vessel must carry a combination of day and night visual distress signals indicated in Table 141.370 of § 141.370 for specified areas where the vessel operates.

(b) Day and night visual distress signals. Hand-held red flare distress signals, approved under approval series 160.021 or 160.121, and hand-held rocket-propelled parachute red flares, approved under approval series 160.036 or 160.136, are acceptable as both day and night signals.

(c) Signals for day visual distress only. Floating orange smoke signals, approved under approval series 160.022, 160.122, or 160.157, and hand-held orange smoke distress signals, approved under approval series 160.037, are only acceptable as day signals.

(d) Limited geographic area. A vessel operating in a limited geographic area on a short run limited to approximately 30 minutes away from the dock is not required to carry visual distress signals under this section.

(e) Stowage. Each pyrotechnic distress signal carried to meet this section must be stowed in either:

(1) A portable watertight container carried at the operating station. Portable watertight containers for pyrotechnic distress signals must be of a bright color and must be clearly marked in legible contrasting letters at least 12.7 millimeters (0.5 inches) high with "DISTRESS SIGNALS"; or

(2) A pyrotechnic locker secured above the freeboard deck, away from heat, in the vicinity of the operating station.

§ 141.380 Emergency position indicating radio beacon (EPIRB).

(a) Each towing vessel operating on oceans, coastwise, limited coastwise, or beyond 3 nautical miles from shore upon the Great Lakes must carry a Category 1, 406 MHz satellite Emergency Position Indicating Radio Beacon (EPIRB) that meets the requirements of 47 CFR part 80.

(b) When the towing vessel is underway, the EPIRB must be stowed in its float-free bracket with the controls set for automatic activation and be mounted in a manner so that it will float free if the towing vessel sinks.

(c) The name of the towing vessel must be marked or painted in clearly legible letters on each EPIRB, except on an EPIRB in an inflatable liferaft.



(d) The owner or managing operator must maintain valid proof of registration.

Note to paragraph (d). Registration information can be found at [www.beaconregistration.noaa.gov/](http://www.beaconregistration.noaa.gov/).

§ 141.385 Line throwing appliance.

Each towing vessel operating in oceans and coastwise service must have a line throwing appliance approved under approval series 160.040.

(a) Stowage. The line throwing appliance and its equipment must be readily accessible for use.

(b) Additional equipment. The line throwing appliance must have:

(1) The equipment on the list provided by the manufacturer with the approved appliance; and

(2) An auxiliary line that:

(i) Is at least 450 meters (1,500 feet) long;

(ii) Has a breaking strength of at least 40 kilonewtons (9,000 pounds-force); and

(iii) Is, if synthetic, of a dark color or certified by the manufacturer to be resistant to deterioration from ultraviolet light.

Part 142--FIRE PROTECTION

Sec.

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Authority: 46 U.S.C. 3103, 3301, 3306, 3308, 3316, 8104,  
8904; 33 CFR 1.05; DHS Delegation 0170.1.

Subpart A—General

§ 142.100 Purpose.

This part contains requirements for fire suppression  
and detection equipment and arrangements on towing vessels.

§ 142.105 Applicability and delayed implementation for  
existing vessels.

This part applies to all towing vessels subject to  
this subchapter.

(a) An existing towing vessel must comply with the requirements in this part no later than either July 20, 2018 or the date the vessel obtains a Certificate of Inspection (COI), whichever date is earlier.

(b) The delayed implementation provisions in paragraph (a) of this section do not apply to a new towing vessel.

#### Subpart B—General Requirements for Towing Vessels

##### § 142.205 Alternate standards.

(a) Towing vessels in compliance with Chapter II-2 of SOLAS (incorporated by reference, see § 136.112 of this subchapter) will be deemed to be in compliance with this part.

(b) Towing vessels that comply with other alternate standards, deemed by the Commandant to provide an equivalent level of safety and performance, will be in compliance with this part.

##### § 142.210 Alternate arrangements or equipment.

(a) Alternate arrangements or equipment to comply with this part may be approved in accordance with § 136.115 of this subchapter.

(b) All owners or operators of towing vessels with a Towing Safety Management System (TSMS) may comply with the requirements of subpart B of this part by outfitting their

vessels with appropriate alternate arrangements or equipment so long as these variations provide an equivalent level of safety and performance and are properly documented in the TSMS.

(c) The cognizant Officer in Charge, Marine Inspection (OCMI) may require a towing vessel to carry specialized or additional fire protection, suppression, or detection equipment if:

(1) He or she determines that the conditions of the voyage render the requirements of this part inadequate; or

(2) The towing vessel is operated in globally remote areas or severe environments not covered under this part. These areas may include, but are not limited to, polar regions, remote islands, areas of extreme weather, and other remote areas where timely emergency assistance cannot be anticipated.

§ 142.215 Approved equipment.

(a) All hand-portable fire extinguishers, semi-portable fire-extinguishing systems, and fixed fire-extinguishing systems required by this part must be approved by the Commandant (CG-ENG). Where other equipment in this part is required to be approved, such equipment requires the specific approval of the Commandant.

(b) A listing of approved equipment and materials may be found online at <https://cgmix.uscg.mil/equipment>. Each cognizant OCMI may be contacted for information concerning approved equipment and materials.

(c) New installations of fire-extinguishing and fire-detection equipment of a type not required, or in excess of that required by this part, may be permitted if Coast Guard approved, or if accepted by the local OCMI, a TPO, or a Nationally Recognized Testing Laboratory (NRTL). Existing equipment and installations not meeting the applicable requirements of this part may be continued in service so long as they are in good condition and accepted by the local OCMI or TPO.

§ 142.220 Fire hazards to be minimized.

Each towing vessel must be maintained and operated so as to minimize fire hazards and to ensure the following:

(a) All bilges and void spaces are kept free from accumulation of combustibile and flammable materials and liquids insofar as practicable.

(b) Storage areas are kept free from accumulation of combustibile and flammable materials insofar as practicable.

§ 142.225 Storage of flammable or combustible products.

(a) Paints, coatings, or other flammable or combustible products onboard a towing vessel must be stored in a designated storage room or cabinet when not in use.

(b) If a storage room is provided, it may be any room or compartment that is free of ignition sources.

(c) If a dedicated storage cabinet is provided it must be secured to the vessel so that it does not move and must be either:

(1) A flammable liquid storage cabinet that satisfies UL 1275 (incorporated by reference, see § 136.112 of this subchapter); or

(2) A flammable liquid storage cabinet that satisfies FM Approvals Standard 6050 (incorporated by reference, see § 136.112 of this subchapter); or

(3) Another suitable steel container that provides an equivalent level of protection.

(d) A B-II portable fire extinguisher must be located near the storage room or cabinet. This is in addition to the portable fire extinguishers required by Tables 142.230(d)(1) and 142.230(d)(2) of § 142.230.

§ 142.226 Firefighter's outfit.

Each towing vessel 79 feet or more in length operating on oceans and coastwise routes that does not have an

installed fixed fire-extinguishing system must have the following:

(a) At least two firefighter's outfits that meet NFPA 1971 (incorporated by reference, see § 136.112 of this subchapter); and

(b) Two self-contained breathing apparatus of the pressure demand, open circuit type, approved by the National Institute for Occupational Safety and Health (NIOSH), under 42 CFR part 84. The breathing apparatus must have a minimum 30-minute air supply and full facepiece.

§ 142.227 Fire axe.

Each towing vessel must be equipped with at least one fire axe that is readily accessible for use from the exterior of the vessel.

§ 142.230 Hand-portable fire extinguishers and semi-portable fire-extinguishing systems.

(a) Hand-portable fire extinguishers and semi-portable fire-extinguishing systems are classified by a combination letter and Roman numeral. The letter indicates the type of fire which the unit could be expected to extinguish, and the Roman numeral indicates the relative size of the unit.

(b) For the purpose of this subchapter, all required hand-portable fire extinguishers and semi-portable fire-extinguishing systems must include Type B classification, suitable for extinguishing fires involving flammable liquids, grease, etc.

(c) The number designations for size run from "I" for the smallest to "V" for the largest. Sizes I and II are hand-portable fire extinguishers; sizes III, IV, and V are semi-portable fire-extinguishing systems, which must be fitted with hose and nozzle or other practical means to cover all portions of the space involved. Examples of the sizes for some of the typical hand-portable fire extinguishers and semi-portable fire-extinguishing systems appear in Table 142.230(c) of this section.

Table 142.230(c)-Portable and Semi-portable  
Extinguishers

Classification	Foam, liters (gallons)	Carbon dioxide, kilograms (pounds)	Dry chemical, kilograms (pounds)
B-I	4.75 (1.25)	2 (4)	1 (2)
B-II	9.5 (2.5)	7 (15)	4.5 (10)
B-III	45 (12)	16 (35)	9 (20)
B-IV	75 (20)	23 (50)	13.5 (30)
B-V	125 (33)	45 (100)	23 (50)



(d) (1) Towing vessels of 65 feet or less in length must carry at least the minimum number of hand-portable fire extinguishers set forth in Table 142.230(d) (1) of this section.

Table 142.230(d) (1) B-I Hand-portable fire extinguishers

Length, feet	Minimum number of B-I hand-portable fire extinguishers required <sup>1</sup>	
	No fixed fire-extinguishing system in machinery space	Fixed fire-extinguishing system in machinery space
Under 26 <sup>2</sup>	1	0
26 and over, but under 40	2	1
40 and over, but not over 65	3	2

<sup>1</sup> One B-II hand-portable fire extinguisher may be substituted for two B-I hand-portable fire extinguishers.

<sup>2</sup> See § 136.105 of this subchapter concerning vessels under 26 feet.

(2) Towing vessels of more than 65 feet in length must carry at least the minimum number of hand-portable fire extinguishers set forth in Table 142.230(d) (2) of this section.

Table 142.230 (d) (2) B-II Hand-portable fire extinguishers

Gross tonnage—		Minimum number of B-II hand-portable fire extinguishers
Over	Not over	
	50	1
50	100	2
100	500	3

500	1,000	6
1,000		8

(i) In addition to the hand-portable extinguishers required by paragraph (d) (2) of this section, one Type B-II hand-portable fire extinguisher must be fitted in the engine room for each 1,000 brake horsepower of the main engines or fraction thereof. A towing vessel is not required to carry more than six additional B-II extinguishers in the engine room for this purpose, irrespective of horsepower.

(ii) [Reserved]

(e) The frame or support of any size III, IV, or V semi-portable extinguisher fitted with wheels must be welded or otherwise permanently attached to a steel bulkhead or deck to prevent it from rolling under heavy sea conditions.

§ 142.235 Vessels contracted for prior to November 19, 1952.

(a) Towing vessels contracted for construction prior to November 19, 1952, must meet the applicable provisions of this part concerning the number and general type of equipment required.

(b) Existing equipment and installations previously approved, but not meeting the applicable requirements for approval by the Commandant, may be continued in service so long as they are in good condition.

(c) All new installations and replacements must meet the requirements of this part.

§ 142.240 Inspection, testing, maintenance, and records.

(a) Inspection and testing. All hand-portable fire extinguishers, semi-portable fire-extinguishing systems, fire-detection systems, and fixed fire-extinguishing systems, including ventilation, machinery shutdowns, and fixed fire-extinguishing system pressure-operated dampers onboard the vessel, must be inspected or tested at least once every 12 months, as prescribed in paragraphs (a)(1) through (8) of this section, or more frequently if otherwise required by the TSMS applicable to the vessel.

(1) Portable fire extinguishers must be tested in accordance with the inspection, maintenance procedures and hydrostatic pressure tests required by Chapters 7 and 8 of NFPA 10, Portable Fire Extinguishers (incorporated by reference, see § 136.112 of this subchapter), with the frequency as specified by NFPA 10. In addition, carbon dioxide and Halocarbon portable fire extinguishers must be refilled when the net content weight loss exceeds that

specified for fixed systems in Table 142.240 of this section.

(2) Semi-portable and fixed fire-extinguishing systems must be inspected and tested, as required by Table 142.240 of this section, in addition to the tests required by §§ 147.60 and 147.65 of this chapter.

(3) Flexible connections and discharge hoses on all semi-portable extinguishers and fixed extinguishing systems must be inspected and tested in accordance with § 147.65 of this chapter.

(4) All cylinders containing compressed gas must be tested and marked in accordance with § 147.60 of this chapter.

(5) All piping, controls, valves, and alarms must be inspected; and the operation of controls, alarms, ventilation shutdowns, and pressure-operated dampers for each fixed fire-extinguishing system and detecting system must be tested, to determine that the system is operating properly.

(6) The fire main system must be charged, and sufficient pressure must be verified at the most remote and highest outlets.

(7) All fire hoses must be inspected for excessive wear, and subjected to a test pressure equivalent to the

maximum service pressure. All fire hoses which are defective and incapable of repair must be destroyed.

(8) All smoke- and fire-detection systems, including detectors and alarms, must be tested.

Table 142.240 Semi-portable and Fixed Fire-Extinguishing Systems

Type System	Test
Carbon dioxide	Weigh cylinders. Recharge if weight loss exceeds 10 percent of weight of the charge. Test time delays, alarms, and ventilation shutdowns with carbon dioxide, nitrogen, or other nonflammable gas as stated in the system manufacturer's instruction manual. Inspect hoses for damage or decay. Ensure that nozzles are unobstructed. Cylinders must be tested and marked, and all flexible connections on fixed carbon dioxide systems must be tested or renewed, as required by §§ 147.60 and 147.65 of this chapter.
Halon and Halocarbon	Recharge or replace if weight loss exceeds 5 percent of the weight of the charge or if cylinder has a pressure gauge, recharge cylinder if pressure loss exceeds 10 percent adjusted for temperature. Test time delays, alarms, and ventilation shutdowns with carbon dioxide, nitrogen, or other nonflammable gas as stated in the system manufacturer's instruction manual. Inspect hoses for damage or decay. Ensure that nozzles are unobstructed. Cylinders must be tested and marked, and all flexible connections to Halon 1301 and halocarbon cylinders must be tested or renewed, as required by §§ 147.60 and 147.65 or § 147.67 of this chapter. NOTE: Halon 1301 system approvals have expired, but existing systems may be

	retained if they are in good and serviceable condition to the satisfaction of the Coast Guard inspector.
Dry Chemical (cartridge operated)	Inspect pressure cartridge and replace if end is punctured or if determined to have leaked or is in an unsuitable condition. Inspect hose and nozzle to see if they are clear. Insert charged cartridge. Ensure dry chemical is free flowing (not caked) and extinguisher contains full charge.
Dry chemical (stored pressure)	See that pressure gauge is within operating range. If not, or if the seal is broken, weigh or otherwise determine that extinguisher is fully charged with dry chemical. Recharge if pressure is low or dry chemical is needed.
Foam (stored pressure)	See that pressure gauge, if so equipped, is within the operating range. If not, or if the seal is broken, weigh or otherwise determine that extinguisher is fully charged with foam. Recharge if pressure is low or foam is needed. Replace premixed agent every 3 years.
Inert gas	Recharge or replace if cylinder pressure loss exceeds 5 percent, adjusted for temperature. Test time delays, alarms, and ventilation shutdowns with carbon dioxide, nitrogen, or other nonflammable gas as stated in the system manufacturer's instruction manual. Inspect hoses and nozzles to ensure they are clear.
Water mist	Test and inspect system in accordance with the maintenance instructions in the system manufacturer's design, installation, operation, and maintenance manual.

(b) Maintenance. In addition to the requirements in paragraph (a) of this section, all fire-suppression and detection equipment and systems on board a towing vessel

must be maintained in accordance with the attached nameplate, manufacturer's approved design manual, or as otherwise provided in any TSMS applicable to the vessel.

(c) Records. (1) The records of inspections and tests of fire-detection systems and fixed fire-extinguishing systems must be recorded in the TVR, official logbook, or in accordance with any TSMS applicable to the vessel. The following minimum information is required:

(i) The dates when inspections and tests were performed, the number and any other identification of each unit inspected and tested, the results of the inspections and tests, and the name of the crewmember, surveyor or auditor and any others conducting the inspections and tests, must be included.

(ii) Receipts and other records generated by these inspections and tests must be retained for at least 1 year and made available upon request.

(2) The records of inspections and tests of hand-portable fire extinguishers and semi-portable fire-extinguishing systems may be recorded in accordance with paragraph (c)(1) of this section, or on a tag attached to each unit by a qualified servicing organization.

§ 142.245 Requirements for training crews to respond to fires.

(a) Drills and instruction. The master of a towing vessel must ensure that each crewmember participates in fire-fighting drills and receives instruction at least once each month. The instruction may coincide with the drills, but is not required to do so. All crewmembers must be familiar with their fire-fighting duties, and, specifically how to:

(1) Fight a fire in the engine room and elsewhere onboard the towing vessel, including how to:

(i) Operate all of the fire-extinguishing equipment onboard the towing vessel;

(ii) Stop any mechanical ventilation system for the engine room and effectively seal all natural openings to the space to prevent leakage of the extinguishing agent; and

(iii) Operate the fuel shut-off(s) for the engine room.

(2) Activate the general alarm;

(3) Report inoperative alarm systems and fire-detection systems; and

(4) Don a firefighter's outfit and a self-contained breathing apparatus, if the vessel is so equipped.



(b) Alternative form of instruction. Video training, followed by a discussion led by someone familiar with the contingencies listed in paragraph (a) of this section, is an acceptable, alternative form of instruction. This instruction may occur either onboard or off the towing vessel.

(c) Participation in drills. Drills must take place onboard the towing vessel as if there were an actual emergency. They must include:

- (1) Participation by all crewmembers;
- (2) Breaking out and using, or simulating the use of, emergency equipment;
- (3) Testing of all alarm and detection systems by operation of the test switch or by activation of one or more devices;
- (4) Putting on protective clothing by at least one person, if the towing vessel is so equipped; and
- (5) Functionally testing the self-priming capability of the portable fire pump, if the towing vessel is so equipped.

(d) Safety orientation. The master must ensure that each crewmember who has not participated in the drills required by paragraph (a) of this section and received the instruction required by that paragraph (a) receives a

safety orientation within 24 hours of reporting for duty. The safety orientation must cover the particular contingencies listed in paragraph (a) of this section.

Note to § 142.245. See § 140.915 for requirements for keeping records of training.

#### Subpart C—Fire Extinguishing and Detection Equipment Requirements

##### § 142.300 Excepted vessels.

Excepted vessels, as defined in § 136.110 of this subchapter, need not comply with the provisions of §§ 142.315 through 142.330.

##### § 142.315 Additional fire-extinguishing equipment requirements.

(a) A towing vessel that is:

(1) Certificated for rivers, lakes, bays, and sounds, less than 3 nautical miles from shore on the Great Lakes; or

(2) Certificated for limited coastwise, coastwise, oceans or waters beyond 3 nautical miles from shore on the Great Lakes, whose contract for construction was executed prior to August 27, 2003; or

(3) Pushing a barge ahead or hauling a barge alongside, when the barge's coastwise, limited coastwise, or Great Lakes route is restricted, as indicated on its

COI, so that the barge may operate "in fair weather only, within 12 miles of shore" or with words to that effect, must be equipped with either:

(i) An approved B-V semi-portable fire-extinguishing system to protect the engine room; or

(ii) A fixed fire-extinguishing system installed to protect the engine room.

(b) A towing vessel that is certificated for limited coastwise, coastwise, oceans, or beyond 3 nautical miles from shore on the Great Lakes whose contract for construction was executed on or after August 27, 2003, except for those specified in paragraph (a)(3) of this section, must be equipped with both:

(1) An approved B-V semi-portable fire-extinguishing system to protect the engine room; and

(2) A fixed fire-extinguishing system installed to protect the engine room.

§ 142.325 Fire pumps, fire mains, and fire hoses.

Each towing vessel must have either a self-priming, power-driven, fixed fire pump, a fire main, and hoses and nozzles in accordance with paragraphs (a) through (d) of this section; or a portable pump, and hoses and nozzles, in accordance with paragraphs (e) and (f) of this section.

(a) A fixed fire pump must be capable of:

(1) Delivering water simultaneously from the two highest hydrants, or from both branches of the fitting if the highest hydrant has a Siamese fitting, at a pitot-tube pressure of at least 344 kilopascals (kPa) (50 pounds per square inch (psi)), and a flow rate of at least 300 liters per minute (lpm) (80 gallons per minute (gpm)); and

(2) Being energized remotely from a safe place outside the engine room and at the pump.

(b) All suction valves necessary for the operation of the fire main must be kept in the open position or capable of operation from the same place where the remote fire pump control is located.

(c) The fire main must have a sufficient number of fire hydrants with attached hose to allow a stream of water to reach any part of the machinery space using a single length of fire hose.

(d) The hose must be a lined commercial fire hose 15 meters (50 feet) in length, at least 40 millimeters (1.5 inches) in diameter, and fitted with a nozzle made of corrosion-resistant material capable of providing a solid stream and a spray pattern.

(e) The portable fire pump must be self-priming and power-driven, with:

(1) A minimum capacity of at least 300 LPM (80 gpm) at a discharge gauge pressure of not less than 414 kPa (60 psi), measured at the pump discharge;

(2) A sufficient amount of lined commercial fire hose 15 meters (50 feet) in length, at least 40 mm (1.5 inches) in diameter and immediately available to attach to it so that a stream of water will reach any part of the vessel; and

(3) A nozzle made of corrosion-resistant material capable of providing a solid stream and a spray pattern.

(f) The pump must be stowed with its hose and nozzle outside of the machinery space.

§ 142.330 Fire-detection system requirements.

(a) Fire-detection systems. Except as provided in paragraph (a)(8) of this section, each towing vessel must have a fire-detection system installed to detect engine room fires. The owner or managing operator must ensure the following:

(1) Each detector, control panel, remote indicator panel, and fire alarm are approved by the Commandant under approval series 161.002 or listed by a NRTL as set forth in 29 CFR 1910.7;

(2) The system is installed, tested, and maintained in accordance with the manufacturer's design manual;

(3) The system is arranged and installed so a fire in the engine room automatically sets off alarms on a fire detection control panel at the operating station. On vessels with more than one operating station, only one of them must be outfitted with a fire detection control panel. Any other operating station must be outfitted with either a fire detection control panel or a remote indicator panel;

(4) The control panel includes:

(i) A power available light;

(ii) An audible to notify crew of a fire;

(iii) Visual alarm alarms to identify the zone or zones of origin of the fire;

(iv) A means to silence the audible alarm while maintaining indication by the visual alarms;

(v) A circuit-fault detector test-switch, or internal supervision of circuit integrity; and

(vi) Labels for all switches and indicator lights, identifying their functions.

(5) The system draws power from two sources. Switchover from the primary source to the secondary source may be either manual or automatic;

(6) The system serves no other purpose, unless it is an engine room monitoring system complying with paragraph (a) (8) of this section; and

(7) The design of the system and its installation on the towing vessel is certified and inspected by a registered professional engineer with experience in fire-detection system design, by a technician with qualifications as a National Institute for Certification in Engineering Technologies (NICET) level IV fire alarm engineering technician, or by an authorized classification society with equivalent experience, to comply with paragraphs (a)(1) through (6) of this section.

(8) A towing vessel whose construction was contracted for prior to January 18, 2000, may use an existing engine room monitoring system (with fire-detection capability) instead of a fire-detection system, if the monitoring system is operable and complies with paragraphs (a)(2) through (7) of this section, and uses detectors listed by an NRTL.

(b) Smoke detection in berthing spaces. Each towing vessel must be equipped with a means to detect smoke in the berthing spaces and lounges that alerts individuals in those spaces. This may be accomplished by an installed detection system, or by using individual battery-operated detectors meeting UL 217 (incorporated by reference, see § 136.112 of this subchapter). Detection systems or

individual detectors must be kept operational at all times when the crew is onboard the towing vessel.

(c) Heat-detection system in galley. Each new towing vessel equipped with a galley must have a heat-detection system with one or more restorable heat-sensing detectors to detect fires in the galley. The system must be arranged to sound an audible alarm at each operating station. This may be a separate zone in the detection system required by paragraph (a) of this section, or a separate detection system complying with paragraphs (a)(1) and (2) of this section.

#### Part 143--MACHINERY AND ELECTRICAL SYSTEMS AND EQUIPMENT

##### Sec.

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Authority: 46 U.S.C. 3103, 3301, 3306, 3308, 3316, 8104, 8904; 33 CFR 1.05; DHS Delegation No. 0170.1.

Subpart A—General

§ 143.100 Purpose.

This part contains requirements for the design, installation, and operation of primary and auxiliary machinery and electrical systems and equipment on towing vessels.

§ 143.105 Applicability.

This part applies to all towing vessels subject to this subchapter. The specific applicability of requirements in each subpart is set forth in that subpart.

§ 143.115 Definitions.

The definitions provided in § 136.110 of this subchapter apply to this part. In addition, the following definition applies exclusively to this part:

Independent means the equipment is arranged to perform its required function regardless of the state of operation, or failure, of other equipment.

Subpart B—Requirements for All Towing Vessels

§ 143.200 Applicability.

(a) This subpart applies to all towing vessels subject to this subchapter.

(b) Except as noted paragraph (c) of this section, which lists later implementation dates for requirements in §§ 143.450 and 143.460, an existing towing vessel must comply with the applicable requirements in this part no

later than either July 20, 2018 or the date the vessel obtains a Certificate of Inspection (COI), whichever date is earlier. The delayed implementation provisions in this section do not apply to a new towing vessel.

(c) Existing vessels must meet the pilothouse alerter and towing machinery requirements of §§ 143.450 and 143.460 no later than 5 years after the issuance of the first COI for the vessel.

§ 143.205 General.

(a) Machinery and electrical systems must be designed and maintained to provide for safe operation of the towing vessel and safety of persons onboard under normal and emergency conditions.

(b) The crew of each towing vessel must demonstrate the ability to operate the primary and auxiliary machinery and electrical systems for which they are responsible, and to do so under normal and emergency conditions. This includes, but is not limited to, responses to alarms and restoration of propulsion and steering in the event of failure.

(c) Propulsion machinery, including main engines, reduction gears, shafting, bearings, and electrical equipment and systems, must:

(1) Be maintained to ensure proper operation;

(2) Be suitable for route and service; and

(3) Have suitable propulsion controls to provide the operator full control at each operating station.

(d) Repairs and minor alterations to existing towing vessels must be made in accordance with this part. New installations that are not replacements in kind must comply with the requirements of subpart C of this part, if applicable.

§ 143.210 Alternate design or operational considerations.

(a) Machinery or electrical systems of a novel design, unusual form, or special material that cannot be reviewed or approved in accordance with this part, may be approved by the Commanding Officer, Marine Safety Center. It must be shown by systematic analysis, based on engineering principles, that the machinery or electrical equipment or system provides an equivalent level of safety. The owner or managing operator must submit detailed plans, material component specifications, and design criteria, including the expected towing vessel service and operating environment, to the Marine Safety Center. Examples of novel design include use of liquefied natural gas, compressed natural gas, or propane fuel for propulsion, and hybrid, fuel cell, or battery propulsion.

(b) Alternate arrangements or equipment to comply with this part may be approved in accordance with § 136.115 of this subchapter.

§ 143.215 Existing vessels built to class.

(a) An existing towing vessel classed by a recognized classification society, as appropriate for the intended service and routes, is considered in compliance with the machinery and electrical standards of this subpart.

(b) An existing vessel built and equipped to conform to a recognized classification society's rules, appropriate for the intended service and routes, but not currently classed, may be deemed by the Officer in Charge, Marine Inspection (OCMI), or third-party organization (TPO), to be in compliance with this part, provided that the towing vessel conforms to the class rules.

(c) Existing vessels meeting either paragraph (a) or (b) of this section must also meet the requirements of §§ 143.245 and 143.450.

§ 143.220 Machinery space fire prevention.

(a) All seals and gaskets must be properly maintained to prevent leaks of flammable or combustible liquid, as those terms are defined in 46 CFR subpart 30.10, into the machinery space.

(b) Piping and machinery components that exceed 220 °C (428 °F), including fittings, flanges, valves, exhaust manifolds, and turbochargers, must be insulated. Measures must be in place to prevent flammable or combustible liquid piping leaks from coming into contact with these components.

(c) Flammable and combustible products must not be stored in machinery spaces, unless they are stored in a suitable container that meets the requirements of § 142.225 of this subchapter.

§ 143.225 Control and monitoring requirements.

(a) Each towing vessel must have a means to monitor and control the amount of thrust, rudder angle, and (if applicable) direction of thrust, at each operating station.

(b) Each towing vessel equipped with rudder(s) must have a means to monitor and control the position of the rudder(s) at each operating station.

§ 143.230 Alarms and monitoring.

(a) Each towing vessel must have a reliable means to provide notification when an emergency condition exists or an essential system develops problems that require attention. The following alarms must be provided:

- (1) Main engine low lubricating oil pressure;
- (2) Main engine high cooling water temperature;

(3) Auxiliary generator engine low lubricating oil pressure;

(4) Auxiliary generator engine high cooling water temperature;

(5) High bilge levels;

(6) Low hydraulic steering fluid levels, if applicable; and

(7) Low fuel level, if fitted with a day tank.

(b) Alarms must:

(1) Be visible and audible at each operating station.

The alarm located at the operating station may be a summary alarm; if the alarm at the operating station is a summary alarm, the specific alarm condition must be indicated at the machinery or bilge location;

(2) Have a means to test actuation at each operating station or have a continuous self-monitoring alarm system which actuates if an alarm point fails or becomes disabled;

(3) Continue until they are acknowledged; and

(4) Not interfere with night vision at the operating station.

(c) The following systems must be equipped with gauges at the machinery location:

(1) Main engine lubricating oil pressure and main engine RPM;

- (2) Main engine cooling water temperature;
- (3) Auxiliary generator engine lubricating oil pressure and auxiliary generator engine RPM;
- (4) Auxiliary generator engine cooling water temperature; and
- (5) Hydraulic steering fluid pressure, if the vessel is equipped with hydraulic steering systems.

§ 143.235 General alarms.

(a) This section does not apply to an excepted vessel as defined in § 136.110 of this subchapter.

(b) Each towing vessel must be fitted with a general alarm that:

- (1) Is activated at each operating station and can notify persons onboard in the event of an emergency;
- (2) Is capable of notifying persons in any accommodation, work space, and the engine room;
- (3) Has installed, in the engine room and any other area where background noise makes a general alarm hard to hear, a supplemental flashing red light that is identified with a sign that reads: "Attention General Alarm—When Alarm Sounds or Flashes Go to Your Station"; and
- (4) A public-address (PA) system or other means of alerting all persons on the towing vessel may be used in lieu of the general alarm in paragraph (b) of this section



if the system meets the requirements of paragraphs (b) (2) and (3) of this section.

§ 143.240 Communication requirements.

(a) This section does not apply to an excepted towing vessel as defined in § 136.110 of this subchapter.

(b) Each towing vessel must be fitted with a communication system between the pilothouse and the engine room that:

(1) Consists of either fixed or portable equipment, such as a sound-powered telephone, portable radios, or other reliable method of voice communication, with a main or reserve power supply that is independent of the towing vessel's electrical system; and

(2) Provides two-way voice communication and calling between the pilothouse and either the engine room or a location immediately adjacent to an exit from the engine room.

(c) Towing vessels with more than one propulsion unit and independent pilothouse control for all engines are not required to have internal communication systems.

(d) When the pilothouse engine controls and the access to the engine room are within 3 meters (10 feet) of each other and allow unobstructed visible contact between

them, direct voice communication is acceptable instead of a communication system.

§ 143.245 Readiness and testing.

(a) Essential systems or equipment must be regularly tested and examined. Tests and examinations must verify that the system or equipment functions as designed. If a component is found unsatisfactory, it must be repaired or replaced. Test and examination procedures must be in accordance with manufacturer's instructions or the Towing Safety Management System (TSMS) applicable to the vessel, if the vessel has a TSMS.

(b) Each towing vessel must perform the applicable tests in Table 143.245(b) of this section. The tests required by this section must be recorded in accordance with part 140 of this subchapter.

Table 143.245(b) Required tests and frequency

Tests of:	Frequency:
Propulsion controls; ahead and astern at the operating station.	Before the vessel gets underway, but no more than once in any 24 hour period.
Steering controls at the operating station.	Before the vessel gets underway, but no more than once in any 24 hour period.
Pilothouse alerter system.	Weekly.
All alternate steering and propulsion controls.	At least once every 3 months.
Power supply for alarm actuation circuits for	At least once every 3 months.

alarms required by § 143.230.	
Communications required by § 143.240.	Weekly.
General alarm if the vessel is so equipped.	Weekly.
Emergency lighting and power if the vessel is so equipped.	At least once every 3 months.
Charge of storage batteries if the vessel is so equipped, for emergency lighting and power.	At least once every 3 months.
Alarm setpoints.	Twice every 5 years, with no more than 3 years elapsing since last test.
Pressure vessel relief valves.	Twice every 5 years, with no more than 3 years elapsing since last test.
All other essential systems.	At least once every 3 months.

§ 143.250 System isolation and markings.

Electrical equipment, piping for flammable or combustible liquid, seawater cooling, or fire-fighting systems must be provided with isolation devices and markings as follows:

(a) Electrical equipment must be provided with circuit isolation and must be marked as described in § 143.400.

(b) Electrical panels or other enclosures containing more than one source of power must be fitted with a sign warning persons of this condition and identifying where to secure all sources.

(c) Piping for flammable or combustible liquid, seawater cooling, or firefighting systems must be fitted with isolation valves that are clearly marked by labeling or color coding that enables the crew to identify its function.

(d) Any piping system that penetrates the hull below the waterline must be fitted with an accessible valve, located as close to the hull penetration as is practicable, for preventing the accidental admission of water into the vessel either through such pipes or in the event of a fracture of such pipe. The valve must be clearly marked by labeling or color coding that enables the crew to identify its function.

(e) Color coding required by this section may be met by complying with coding standards contained in the ISO 14726:2008(E) (incorporated by reference, see § 136.112 of this subchapter), or in accordance with the TSMS applicable to the vessel.

§ 143.255 Fuel system requirements.

(a) Fuel systems for towing vessel main engines and generators must have a documented maintenance plan to ensure proper operation of the system.

(b) A continuous supply of clean fuel must be provided to main propulsion engines and generators.

(c) The fuel system must include filters and/or purifiers. Where filters are used:

(1) A supply of spare fuel filters must be provided onboard; and

(2) Fuel filters must be replaced in accordance with manufacturer's requirements or the vessel's TSMS, if applicable.

(d) Except as otherwise permitted under § 143.210 or § 143.520, no fuel other than diesel fuel may be used.

§ 143.260 Fuel shutoff requirements.

(a) This section does not apply to an excepted towing vessel as defined in § 136.110 of this subchapter.

(b) To stop the flow of fuel in the event of a fire or break in the fuel line, a remote fuel shutoff valve must be fitted on any fuel line that supplies fuel directly to a propulsion engine or generator prime mover.

(c) The valve must be installed in the fuel piping directly outside of the fuel oil supply tank.

(d) The valve must be operable from a safe place outside the space where the valve is installed.

(e) Each remote valve control must be marked in clearly legible letters, at least 25 millimeters (1 inch) high, indicating the purpose of the valve and the way to operate it.

§ 143.265 Additional fuel system requirements for towing vessels built after January 18, 2000.

(a) Applicability. This section applies to towing vessels that are not excepted vessels, as defined in § 136.110 of this subchapter, and that were built after January 18, 2000. Except for outboard engines or portable bilge or fire pumps, each fuel system must comply with this section.

(b) Portable fuel systems. The vessel must not incorporate or carry portable fuel systems, including portable tanks and related fuel lines and accessories, except when used for outboard engines or portable bilge or fire pumps. The design, construction, and stowage of portable tanks and related fuel lines and accessories must comply with the ABYC H-25 (incorporated by reference, see § 136.112 of this subchapter).

(c) Vent pipes for integral fuel tanks. Each integral fuel tank must have a vent that connects to the highest point of the tank, discharges on a weather deck through a bend of 180 degrees, and is fitted with a 30-by-30-mesh corrosion-resistant flame screen. Vents from two or more fuel tanks may combine in a system that discharges on a weather deck. The net cross-sectional area of the vent pipe for the tank must be not less than 312.3 square

millimeters (0.484 square inches), for any tank filled by gravity. The cross-sectional area of the vent pipe, or the sum of the vent areas when multiple vents are used, must not be less than that of the fill pipe cross-sectional area for any tank filled by pump pressure.

(d) Fuel piping. Except as permitted in paragraphs (d)(1) through (3) of this section, each fuel line must be seamless and made of steel, annealed copper, nickel-copper, or copper-nickel. Each fuel line must have a wall thickness no less than 0.9 millimeters (0.035 inches) except for the following:

(1) Aluminum piping is acceptable on an aluminum-hull towing vessel if it is at least Schedule 80 in thickness.

(2) Nonmetallic flexible hose is acceptable if it:

(i) Is used in lengths of not more than 0.76 meters (30 inches);

(ii) Is visible and easily accessible;

(iii) Does not penetrate a watertight bulkhead;

(iv) Is fabricated with an inner tube and a cover of synthetic rubber or other suitable material reinforced with wire braid; and

(v) Either:

(A) If designed for use with compression fittings, is fitted with suitable, corrosion-resistant, compression

fittings, or fittings compliant with the SAE J1475 Revised JUN96 (incorporated by reference, see § 136.112 of this subchapter); or

(B) If designed for use with clamps, is installed with two clamps at each end of the hose. Clamps must not rely on spring tension and must be installed beyond the bead or flare or over the serrations of the mating spud, pipe, or hose fitting.

(3) Nonmetallic flexible hose complying with SAE J1942 Revised APR2007 (incorporated by reference, see § 136.112 of this subchapter), is also acceptable.

(e) Alternative standards. A towing vessel of less than 79 feet in length may comply with any of the following standards for fuel systems instead of those of paragraph (d) in this section:

(1) ABYC H-33 (incorporated by reference, see § 136.112 of this subchapter);

(2) Chapter 5 of NFPA 302 (incorporated by reference, see § 136.112 of this subchapter); or

(3) 33 CFR chapter I, subchapter S (Boating Safety).  
§ 143.270 Piping systems and tanks.

Piping and tanks exposed to the outside of the hull must be made of metal and maintained in a leak free condition.



§ 143.275 Bilge pumps or other dewatering capability.

There must be an installed or portable bilge pump for emergency dewatering. Any portable pump must have sufficient hose length and pumping capability. All installed bilge piping must have a check/foot valve in each bilge suction that prevents unintended backflooding through bilge piping.

§ 143.300 Pressure vessels.

(a) Pressure vessels over 5 cubic feet in volume and over 15 pounds per square inch maximum allowable working pressure (MAWP) must be equipped with an indicating pressure gauge (in a readily visible location) and with one or more spring-loaded relief valves. The total relieving capacity of such relief valves must prevent pressure from exceeding the MAWP, as established by the manufacturer, by more than 10 percent.

(b) Pressure vessels must be externally examined annually. Relief valves must be tested in accordance with § 143.245.

(c) All pressure vessels must have the MAWP indicated by a stamp, nameplate, or other means visible to the crew.

(d) Pressure vessels installed after [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must meet the requirements of § 143.545.

§ 143.400 Electrical systems, general.

(a) Electrical systems and equipment must function properly and minimize system failures and fire and shock hazards.

(b) Installed electrical power source(s) must be capable of carrying the electrical load of the towing vessel under normal operating conditions.

(c) Electrical equipment must be marked with its respective current and voltage ratings.

(d) Individual circuit breakers on switchboards and distribution panels must be labeled with a description of the loads they serve.

(e) Electrical connections must be suitably installed to prevent them from coming loose through vibration or accidental contact.

(f) Electrical equipment and electrical cables must be suitably protected from wet and corrosive environments.

(g) Electrical components that pose an electrical hazard must be in an enclosure.

(h) Electrical conductors passing through watertight bulkheads must be installed so that the bulkhead remains watertight.

(i) The connections of flexible cable plugs and socket outlets must be designed to prevent unintended separation.

§ 143.410 Shipboard lighting.

(a) Sufficient lighting suitable for the marine environment must be provided within crew working and living areas.

(b) Emergency lighting must be provided for all internal crew working and living areas. Emergency lighting sources must provide for sufficient illumination under emergency conditions to facilitate egress from each space and must be either:

(1) Automatic, battery-operated with a duration of no less than 2 hours; or

(2) Non-electric, phosphorescent adhesive lighting strips that are installed along escape routes and sufficiently visible to enable egress with no power.

(c) Each towing vessel must be equipped with at least two portable, battery-powered lights. One must be located in the pilothouse and the other at the access to the engine room.

§ 143.415 Navigation lights.

(a) Towing vessels more than 65 feet in length must use navigation lights that meet UL 1104 (incorporated by

reference, see § 136.112 of this subchapter) or other standards accepted by the Coast Guard.

(b) Towing vessels 65 feet or less in length may meet the requirements listed in 33 CFR 183.810 or paragraph (a) of this section.

§ 143.450 Pilothouse alerter system.

(a) Except as provided in paragraph (d) or (e) of this section, a towing vessel with overnight accommodations and alternating watches (shift work), when pulling, pushing or hauling alongside one or more barges, must have a system to detect when its master or mate (pilot) becomes incapacitated. The system must:

(1) Have an alarm in the pilothouse distinct from any other alarm;

(2) Require action from the master or officer in charge of a navigational watch, during an interval not to exceed 10 minutes, in order to reset the alarm timer; and

(3) Immediately (within 30 seconds) notify another crewmember if the pilothouse alarm is not acknowledged.

(b) The time interval for the system alarm must be adjustable. The time may be adjusted by the owner or managing operator but must not be in excess of 10 minutes. This time interval, and information on alerter operation,

must be provided on board and specified in the vessel's TSMS if applicable.

(c) The system alarm may be reset physically (e.g. a push button), or the reset may be accomplished by a link to other pilothouse action such as rudder or throttle control movement, or motion detection of personnel.

(d) A towing vessel need not comply with this section if a second person is provided in the pilothouse.

(e) Towing vessels 65 feet or less in length are not required to have a pilothouse alerter system.

§ 143.460 Towing machinery.

(a) Towing machinery such as capstans, winches, and other mechanical devices used to connect the towing vessel to the tow must be designed and installed to maximize control of the tow.

(b) Towing machinery for towing astern must have sufficient safeguards, e.g., towing bitt with crossbar, to prevent the machinery from becoming disabled in the event the tow becomes out of line.

(c) Towing machinery used to connect the towing vessel to the tow must be suitable for its intended service. It must be capable of withstanding exposure to the marine environment, likely mechanical damage, static

and dynamic loads expected during intended service, the towing vessel's horsepower, and arrangement of the tow.

(d) When a winch that has the potential for uncontrolled release under tension is used, a warning must be in place at the winch controls that indicates this. When safeguards designed to prevent uncontrolled release are utilized, they must not be disabled.

(e) Each owner or managing operator must develop procedures to routinely examine, maintain, and replace capstans, winches, and other machinery used to connect the towing vessel to the tow.

#### Subpart C—Requirements for New Towing Vessels

##### § 143.500 Applicability.

(a) This subpart applies to a new towing vessel, as defined in § 136.110 of this subchapter, unless it is an excepted vessel.

(b) Machinery or electrical systems of a novel design, unusual form, or special material must meet section § 143.210.

(c) Unless otherwise noted in §§ 143.515 and 143.520, new towing vessels must also meet the requirements of subpart B of this part.

§ 143.510 Verification of compliance with design standards.

Verification of compliance with the machinery and electrical design standards in this subpart is obtained by following the provisions in §§ 144.135 through 144.145 of this subchapter.

§ 143.515 Towing vessels built to recognized classification society rules.

(a) Except as noted in paragraph (c) of this section, a towing vessel classed by the American Bureau of Shipping (ABS), in accordance with the ABS Rules for Building and Classing Steel Vessels Under 90 Meters (295 Feet) in Length, or the ABS Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways (incorporated by reference, see § 136.112 of this subchapter), as appropriate for the intended service and routes, complies with this subpart.

(b) Except as noted in paragraph (c) of this section, a towing vessel built and equipped to conform to the ABS rules specified in paragraph (a) of this section and appropriate for the intended service and routes, but not currently classed, may be deemed by the OCMI or a TPO to be in compliance with this subpart if it can be shown that the vessel continues to conform to the ABS rules.

(c) A vessel that complies with this subpart as described in paragraph (a) or (b) must also meet the requirements described in §§ 143.585 through 143.595 or the requirements of § 143.600 if it moves tank barges carrying oil or hazardous material in bulk.

(d) Vessels meeting either paragraph (a) or (b) of this section are considered as being in compliance with subpart B of this part except for the readiness and testing requirements of § 143.245, and pilothouse alerter requirements of § 143.450.

(e) Towing vessels built to other recognized classification society rules, appropriate for the intended route and service, may be considered compliant with provisions in this subpart upon approval by the Coast Guard.

§ 143.520 Towing vessels built to American Boat and Yacht Council standards.

(a) Except as noted in paragraphs (b) and (c) of this section, a new towing vessel 65 feet (19.8 meters) or less in length built to conform with the American Boat and Yacht Council (ABYC) standards listed in this paragraph (a) (incorporated by reference, see § 136.112 of this subchapter), complies with this subpart:



- (1) E-11 (2003) - AC & DC Electrical Systems on Boats;
- (2) H-2 (2002) - Ventilation of Boats Using Gasoline;
- (2) H-22 (2005) - Electric Bilge Pump Systems;
- (3) H-24 (2007) - Gasoline Fuel Systems;
- (4) H-25 (2003) - Portable Gasoline Fuel Systems;
- (5) H-32 (2004) - Ventilation of Boats Using Diesel Fuel;
- (6) H-33 (2005) - Diesel Fuel Systems;
- (7) P-1 (2002) - Installation of Exhaust Systems for Propulsion and Auxiliary Engines; and
- (8) P-4 (2004) - Marine Inboard Engines and Transmissions.

(b) New towing vessels, 65 feet or less in length, built to the ABYC standards specified in this section are considered compliant with subpart B of this part except for the readiness and testing requirements of § 143.245.

(c) If the vessel moves tank barges carrying oil or hazardous material in bulk, it must meet either the requirements described in §§ 143.585 through 143.595 or the requirements described in § 143.600.

§ 143.540 Pumps, pipes, valves, and fittings for essential systems.

(a) Pumps, pipes, valves, and fittings in essential systems on vessels must meet ABS Rules for Building and Classing Steel Vessels Under 90 Meters (295 Feet) in Length (incorporated by reference, see § 136.112 of this subchapter), Part 4, Chapter 4.

(b) Pumps, pipes, valves, and fittings in essential systems on towing vessels operating exclusively on rivers or intracoastal waterways may meet ABS Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways (incorporated by reference, see § 136.112 of this subchapter), Part 4, Chapter 3.

§ 143.545 Pressure vessels.

(a) In lieu of meeting the requirements of § 143.300, pressure vessels installed on new towing vessels must meet the requirements of this section.

(b) Pressure vessels over 5 cubic feet in volume and more than 15 psi maximum allowable working pressure must meet ABS Rules for Building and Classing Steel Vessels under 90 Meters (295 Feet) in Length (incorporated by reference, see § 136.112 of this subchapter), Part 4, Chapter 1, Section 1.

§ 143.550 Steering systems.

(a) Steering systems must meet ABS Rules for Building and Classing Steel Vessels under 90 Meters (295 Feet) in Length (incorporated by reference, see § 136.112 of this subchapter), Part 4, Chapter 3, Section 3.

(b) Steering systems on new towing vessels operating exclusively on rivers or intracoastal waterways may meet ABS Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways (incorporated by reference, see § 136.112 of this subchapter), Part 4, Chapter 2, Section 3.

§ 143.555 Electrical power sources, generators, and motors.

(a) General requirements. (1) There must be a source of electrical power sufficient for:

(i) All essential systems as defined by § 136.110 of this subchapter;

(ii) Minimum conditions of habitability; and

(iii) Other installed or portable systems and equipment.

(2) Generators and motors must be suitably rated for the environment where they operate, marked with their respective ratings, and suitably protected against overcurrent.

(3) A towing vessel, other than an excepted vessel, must have a backup or a second power source that has adequate capacity to supply power to essential alarms, lighting, radios, navigation equipment, and any other essential system identified by the cognizant OCMI or a TPO.

(b) Specific requirements. (1) The owner or managing operator must complete a load analysis that shows that the electrical power source is sufficient to power the sum of connected loads described in paragraph (a)(1) of this section utilizing an appropriate load factor for each load. A record of the analysis must be retained by the owner or managing operator.

(2) Installed generators and motors must have a data plate listing rated kilowatts and power factor (or current), voltage, and rated ambient temperature.

(3) Generators must be provided with overcurrent protection no greater than 115 percent of their rated current and utilize a switchboard or distribution panel.

(4) Motors must be provided with overcurrent protection that meets Parts I through VII, Article 430 of NFPA's National Electrical Code (NEC) (incorporated by reference, see § 136.112 of this subchapter). Steering motor circuits must be protected as per Part 4 Chapter 6 Section 2, Regulation 11 (except 11.7) of ABS Rules for

Building and Classing Steel Vessels Under 90 Meters (295 feet) in Length (incorporated by reference, see § 136.112 of this subchapter).

(5) Generators and motors installed in machinery spaces must be certified to operate in an ambient temperature of 50 °C or be derated, or it can be shown that 40 °C ambient temperature will not be exceeded in these spaces.

(6) Each generator and motor, except a submersible-pump motor, must be in an accessible space which is adequately ventilated and as dry as practicable, and must be mounted above the bilges.

(7) A generator driven by a main propulsion unit (such as a shaft generator) may be considered one of the power sources required by paragraph (a) of this section.

(8) Other than excepted vessels, each towing vessel must be arranged so that the following essential loads can be energized from two independent sources of electricity:

- (i) High bilge level alarm required by § 143.230;
- (ii) Emergency egress lighting, unless the requirements of § 143.410(b)(1) or (2) are met;
- (iii) Navigation lights;
- (iv) Pilothouse lighting;
- (v) Engine room lighting;

(vi) Any installed radios and navigation equipment as required by §§ 140.715 and 140.725;

(vii) All distress alerting communications equipment listed in §§ 140.715 and 140.725;

(viii) Any installed fire detection system; and

(ix) Any essential system identified by the cognizant OCMI or TPO, if applicable.

(9) If a battery is used as the second source of electricity required by paragraph (b) (8) of this section, it must be capable of supplying the loads for at least three hours. There must be a means to monitor the condition of the battery backup power source.

§ 143.560 Electrical distribution panels and switchboards.

(a) Each distribution panel or switchboard on a towing vessel must be:

(1) In a location that is accessible, as dry as practicable, adequately ventilated, and protected from falling debris and dripping or splashing water; and

(2) Totally enclosed and of the dead-front type.

(b) Each switchboard accessible from the rear must be constructed to prevent a person's accidental contact with energized parts.

(c) Nonconductive mats or grating must be provided on the deck in front of each switchboard and, if it is

accessible from the rear, on the deck behind the switchboard.

(d) Each un-insulated current-carrying part must be mounted on noncombustible, nonabsorbent, and high-dielectric insulating material.

(e) Equipment mounted on a door of an enclosure must be constructed or shielded so that a person will not come into accidental contact with energized parts.

§ 143.565 Electrical overcurrent protection other than generators and motors.

(a) General requirement. Power and lighting circuits on towing vessels must be protected by suitable overcurrent protection.

(b) Specific requirements. (1) Cable and wiring used in power and lighting circuits must have overcurrent protection that opens the circuit at the standard setting closest to 80 percent of the manufacturer's listed ampacity. Overcurrent protection setting exceptions allowed by NFPA's National Electrical Code (NEC), Article 240 (incorporated by reference, see § 136.112 of this subchapter) may be employed.

(2) If the manufacturer's listed ampacity is not known, tables referenced in Article 310.15(B) of the NEC (incorporated by reference, see § 136.112 of this

subchapter) must be used, assuming a temperature rating of 75 °C and an assumed temperature of 50 °C for machinery spaces and 40 °C for other spaces.

(3) Overcurrent protection devices must be installed in a manner that will not open the path to ground in a circuit; only ungrounded conductors must be protected. Overcurrent protection must be coordinated such that an overcurrent situation is cleared by the circuit breaker or fuse nearest to the fault.

(4) Each transformer must have protection against overcurrent that meets Article 450 of the NEC (incorporated by reference, see § 136.112 of this subchapter).

(5) On a towing vessel, other than an excepted vessel as defined in § 136.110 of this subchapter, essential systems and non-essential systems must not be on the same circuit or share the same overcurrent protective device.

§ 143.570 Electrical grounding and ground detection.

(a) An ungrounded distribution system must be provided with a ground detection system located at the main switchboard or distribution panel that provides continuous indication of circuit status to ground, with a provision to temporarily remove the indicating device from the reference ground.



(b) A dual voltage or grounded electrical distribution system must have the neutral suitably grounded. There must be only one connection to ground, regardless of the number of power sources. This connection must be at the main switchboard or distribution panel.

(c) On a metallic towing vessel, a grounded distribution system must be grounded to the hull. This grounded system must be connected to a common, non-aluminum ground plate. The ground plate must have only one connection to the main switchboard or distribution panel, and the connection must be readily accessible for examination.

(d) On a nonmetallic towing vessel, all electrical equipment must be grounded to a common ground. Multiple ground plates bonded together are acceptable.

(e) Each grounding conductor of a cable must be identified by one of the following means:

- (1) Green braid or green insulation; or
- (2) Stripping the insulation from the entire exposed length of the grounding conductor.

(f) A towing vessel's hull may not carry current as a conductor, except for an impressed-current cathodic-protection system or a battery system used to start an engine.

(g) Cable armor may not be used to ground electrical equipment or systems.

(h) Each receptacle outlet and attachment plug for a portable lamp, tool, or similar apparatus operating at 100 or more volts must have a grounding pole and a grounding conductor in the portable cord.

(i) In a grounded distribution system, only grounded, three-prong appliances may be used. This does not apply to double-insulated appliances or tools and appliances of 50 volts or less.

§ 143.575 Electrical conductors, connections, and equipment.

(a) Each cable and wire on a towing vessel must be installed to meet the following requirements:

(1) Each conductor must have sufficient current-carrying capacity for the circuit in which it is used.

(2) Cable hangers for overhead and vertical cable runs must be installed with metal supports and retention devices at least every 48 inches.

(3) Each wire and cable run must be installed in a manner to prevent contact with personnel, mechanical hazards, and leaking fluids. Wire and cable runs must not be installed in bilges, across a normal walking path, or less than 24 inches from the path of movable machinery

(e.g., cranes, elevators, forktrucks, etc., where the machinery location can change) unless adequately protected.

(4) Connections and terminations must be suitable for the installed conductors, and must retain the original electrical, mechanical, flame-retarding, and where necessary, fire-resisting properties of the conductor. If twist-on types of connectors are used, the connections must be made within an enclosure and the insulated cap of the connector must be secured to prevent loosening due to vibration. Twist-on type of connectors may not be used for making joints in cables, facilitating a conductor splice, or extending the length of a circuit.

(5) Each cable and wire must be installed so as to avoid or reduce interference with radio reception and compass indication.

(6) Each cable and wire must be protected from the weather.

(7) Each cable and wire must be supported in order to avoid chafing or other damage.

(8) Each cable and wire must be protected by metal coverings or other suitable means, if in areas subject to mechanical abuse.

(9) Each cable and wire must be suitable for low temperature and high humidity, if installed in refrigerated compartments.

(10) Each cable and wire must be located outside a tank, unless it supplies power to equipment in the tank.

(11) If wire is installed in a tank, it must have sheathing or wire insulation compatible with the fluid in a tank.

(b) Extension cords must not be used as a permanent connection to a source of electrical power.

(c) Multi-outlet adapters (power strips) may not be connected to other adapters ("daisy-chained"), or otherwise used in a manner that could overload the capacity of a receptacle.

§ 143.580 Alternative electrical installations.

In lieu of meeting the requirements of §§ 143.555 through 143.575, a vessel may meet the following:

(a) ABS Rules for Building and Classing Steel Vessels Under 90 Meters (295 Feet) in Length (incorporated by reference, see § 136.112 of this subchapter), Part 4, Chapter 6; or

(b) ABS Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways (incorporated by reference, see § 136.112 of this

subchapter), Part 4, Chapter 5, if they operate exclusively on rivers or intracoastal waterways.

§ 143.585 General requirements for propulsion, steering, and related controls on vessels that move tank barges carrying oil or hazardous material in bulk.

(a) There must be an alternate means to control the propulsion and steering system which must:

(1) Be independent of the primary control required by § 143.225;

(2) Be located at or near the propulsion and steering equipment; and

(3) Be readily accessible and suitable for prolonged operation.

(b) There must be a means to communicate between each operating station and the alternate propulsion and steering controls.

(c) There must be a means to stop each propulsion engine and steering motor from each operating station.

(d) The means to monitor the amount of thrust, rudder angle, and if applicable, direction (ahead or astern) of thrust must be independent of the controls required by § 143.225.

(e) The propulsion control system required by § 143.225 must be designed so that, in the event of a single

failure of any component of the system, propeller speed and direction of thrust are maintained or reduced to zero.

(f) On a towing vessel with an integrated steering and propulsion system, such as a Z-drive, the control system required by § 143.225 must be designed so that, in the event of a single failure of any component of the system, propeller speed and direction of thrust are maintained or the propeller speed is reduced to zero.

(g) An audible and visual alarm must actuate at each operating station when:

(1) The propulsion control system fails;

(2) A non-follow up steering control system fails, if installed; and

(3) The ordered rudder angle does not match the actual rudder position on a follow-up steering control system, if installed. This alarm must have an appropriate delay and error tolerance to eliminate nuisance alarms.

(h) Alarms must be separate and independent of the control system required by § 143.225.

(i) A means of communication must be provided between each operating station and any crewmember(s) required to respond to alarms.

(j) The two sources of electricity required by § 143.555(a) (3) and (b) (8) must be capable of powering

electrical loads needed to maintain propulsion, steering, and related controls for not less than 3 hours.

(k) The second source of supply required by § 143.555(a) (3) must automatically start to help restore or maintain power to propulsion, steering, and related controls when the main power source fails.

(l) Propulsion, steering, or related controls that are directly reliant on stored energy, such as compressed air, battery power, or hydraulic pressure, must have two independent stored energy systems, such as compressed air cylinders, battery banks, or hydraulic cylinders, that are capable of maintaining the vessel's propulsion, steering, and related controls.

(m) After a power failure, electrical motors used to maintain propulsion and steering must automatically restart when power is restored, unless remote control starting is provided at the operating station.

§ 143.590 Propulsor redundancy on vessels that move tank barges carrying oil or hazardous material in bulk.

(a) A towing vessel must be provided with at least two independent propulsors unless the requirements of § 143.595 are met.

(b) There must be independent controls for each propulsor at each operating station.

(c) In the event of a failure of a single propulsor, the remaining propulsor(s) must have sufficient power to maneuver the vessel to a safe location.

§ 143.595 Vessels with one propulsor that move tank barges carrying oil or hazardous material in bulk.

(a) A towing vessel must have independent, duplicate vital auxiliaries. For the purpose of this section, vital auxiliaries are the equipment necessary to operate the propulsion engine, and include fuel pumps, lubricating oil pumps, and cooling water pumps. In the event of a failure or malfunction of any single vital auxiliary, the propulsion engine must continue to provide propulsion adequate to maintain control of the tow.

(b) In the event of a failure, the corresponding independent duplicate vital auxiliary, described in paragraph (a) of this section, must be fully capable of assuming the operation of the failed unit.

§ 143.600 Alternative standards for vessels that move tank barges carrying oil or hazardous material in bulk.

In lieu of meeting §§ 143.585 through 143.595, a towing vessel may comply with Sections 7-5 (class ABCU) and 3-5 (class R2) of Part 4 of the ABS Rules for Building and Classing Steel Vessels Under 90 Meters (295 Feet) in Length (incorporated by reference, see § 136.112 of this



subchapter), except that a vessel that operates exclusively on rivers or intracoastal waterways does not need to comply with 4-7-4/3.9 and the automatic day tank fill pump requirement of 4-7-4/25.3.

§ 143.605 Demonstration of compliance on vessels that move tank barges carrying oil or hazardous material in bulk.

(a) The owner or managing operator of each towing vessel must devise test procedures that demonstrate compliance with the design and engineering requirements prescribed in this subpart.

(b) The tests required in paragraph (a) of this section must be satisfactorily conducted and witnessed by the cognizant OCMI or a TPO. A record of the tests must be retained by the owner or managing operator and be available upon request of the cognizant OCMI or TPO.

PART 144--CONSTRUCTION AND ARRANGEMENT

Sec.

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Authority: 46 U.S.C. 3103, 3301, 3306, 3308, 3316,  
8104, 8904; 33 CFR 1.05; DHS Delegation No. 0170.1.

Subpart A--General

§ 144.100 Purpose.

This part details the requirements for design, construction and arrangement, and verification of compliance with this part, including document review.

§ 144.105 Applicability and delayed implementation.

This part applies to each towing vessel subject to this subchapter. Note that §§ 144.200 and 144.300 only apply to an existing vessel and that the following sections only apply to a new vessel: §§ 144.205, 144.305, 144.310, 144.405, 144.410, 144.420, 144.425, 144.430, 144.910, and 144.920.

(a) An existing towing vessel must comply with § 144.320 starting [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] and it must comply with the other applicable requirements in this part no later than either July 20, 2018 or the date the vessel

obtains a Certificate of Inspection (COI), whichever date is earlier.

(b) The delayed implementation provisions in paragraph (a) of this section do not apply to a new towing vessel.

(c) Alterations or modifications made to the structure or arrangements of an existing vessel that are a major conversion, made on or after the [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], must comply with the regulations applied to a new towing vessel of this part insofar as is reasonable and practicable. Repairs conducted on an existing vessel, resulting in no significant changes to the original structure or arrangement of the vessel, must comply with the standards applicable to the vessel at the time of construction or, as an alternative, with the regulations in this part.

§ 144.120 A classed vessel.

A vessel currently classed by a recognized classification society is deemed to be in compliance with the requirements of subparts B and C of this part.

§ 144.125 A vessel with a load line.

A vessel with a valid load line certificate issued in accordance with subchapter E of this chapter may be deemed

in compliance with the requirements of subparts B and C of this part.

§ 144.130 A vessel built to the International Convention for the Safety of Life at Sea, 1974, as amended, requirements.

A vessel built to the International Convention for the Safety of Life at Sea, 1974, as amended, is considered to be in compliance with this part.

§ 144.135 Verification of compliance with design standards.

Verification of compliance with the construction and arrangement design standards of this part must be performed according to the following table:

Table 144.135 - Verification of compliance with design standards

	<u>If the vessel is--</u>	<u>Then the applicable requirements must be met--</u>
(a)	A new vessel,	Before the COI is issued.
(b)	A vessel to undergo a major conversion or alteration to the hull, machinery, or equipment that may affect the vessel's safety,	Before the major conversion or alteration is performed.
(c)	A vessel on which a new installation that is not a "replacement in kind" is to be made after [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL	Before the new installation is performed.

	REGISTER],	
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§ 144.140 Qualifications.

Use the following table to determine the individual or entity that may conduct a verification of compliance with design standards required by § 144.135.

Table 144.140

	<u>Verification of compliance with design standards may be performed by --</u>	<u>Provided that--</u>
(a)	A registered professional engineer (P.E.) licensed by one of the states of the United States or the District of Columbia;	The PE ensures he or she does not exceed the scope of his or her P.E. license.
(b)	An authorized classification society that has been delegated the authority to issue the SOLAS Cargo Ship Safety Construction Certificate under 46 CFR 8.320;	The authorized classification society ensures that the employees that perform the verification of compliance holds proper qualifications for the type of verification performed.
(c)	The Coast Guard.	

§ 144.145 Procedures for verification of compliance with design standards.

(a) Verification of compliance with design standards, when required by § 144.135, must be performed by an

individual or entity who meets the requirements of § 144.140.

(b) Verification of compliance with design standards must be based on objective evidence of compliance with the applicable requirements and include:

(1) A description of the vessel's intended service and route;

(2) The standards used for the vessel's design and construction;

(3) Deviations from the standards used, if any;

(4) A statement that the vessel is suitable for the intended service and route; and

(5) The identification of the individual or entity in Table 144.140 of § 144.140 who conducted the verification of compliance.

(c) Verification of compliance with design standards must include review and analyses of sufficient plans, drawings, schematics, calculations, and other documents to ensure the vessel complies with the standards used. The plans must be stamped with the seal authorized for use by the individual or entity performing the verification of compliance, or otherwise indicate that they have been reviewed and determined to meet the applicable standards by

an individual or entity who meets the requirements of § 144.140.

(d) A copy of the verified plan must be provided to the cognizant Officer in Charge, Marine Inspection (OCMI) and the third-party organization (TPO) conducting the surveys, if applicable, except as provided in paragraph (e) of this section.

(e) Plans verified by an authorized classification society need only be provided to the Coast Guard upon request.

(f) If the vessel is a new vessel, a copy of the verified plan must be available at the construction site.

(g) As referred to in this section, the term plan may include, but is not limited to drawings, documents, or diagrams of the following:

- (1) Outboard profile.
- (2) Inboard profile.
- (3) Arrangement of decks.
- (4) Midship section and scantling plans.
- (5) Survival craft embarkation stations.
- (6) Machinery installation, including, but not limited

to:

(i) Propulsion and propulsion control, including shaft details;



(ii) Steering and steering control, including rudder details;

(iii) Ventilation diagrams;

(iv) Fuel transfer and service system, including tanks;

(v) Piping systems including: bilge, ballast, hydraulic, combustible and flammable liquids, vents, and overflows; and

(vi) Hull penetrations and shell connections;

(7) Electrical installation including, but not limited to:

(i) Elementary one-line diagram of the power system;

(ii) Cable lists;

(iii) Type and size of generators and prime movers;

(iv) Type and size of generator cables, bus-tie cables, feeders, and branch circuit cables;

(v) Power and lighting panelboards with number of circuits and rating of energy consuming devices;

(vi) Capacity of storage batteries;

(vii) Rating of circuit breakers and switches, interrupting capacity of circuit breakers, and rating and setting of overcurrent devices; and

(viii) Electrical plant load analysis as required by § 143.555 of this subchapter.

- (8) Lifesaving equipment locations and installation;
- (9) Fire protection equipment installation including, but not limited to:
  - (i) Fire main system plans and calculations;
  - (ii) Fixed gas fire extinguishing system plans and calculations;
  - (iii) Fire detecting system and smoke detecting system plans;
  - (iv) Sprinkler system diagram and calculations; and
  - (v) Portable fire extinguisher types, sizes, and locations;
- (10) Lines and offsets, curves of form, cross curves of stability, tank capacities including size and location on vessel, and other stability documents needed to show compliance; and
- (11) Towing arrangements.

§ 144.155 Verification of compliance with design standards for a sister vessel.

(a) Verification of compliance required by § 144.135 is not required for a sister vessel, provided that:

- (1) The original vessel has been verified as complying with this part;

(2) The owner authorizes the use of the plans for the original vessels for the new construction of the sister vessel;

(3) The standards used in the design and construction of the original vessel have not changed since the original verification of compliance;

(4) The sister vessel is built to the same verified plans, drawings, schematics, calculations, and other documents and equipped with machinery of the same make and model as the original vessel, and has not been subsequently modified;

(5) The sister vessel is built in the same shipyard facility as the original vessel; and

(6) For a sister vessel subject to a stability standard, that the conditions in Table 144.155 of this section are met:

Table 144.155

	<i>If-</i>	<i>Then-</i>
(i)	The delivery date of the sister vessel is not more than 2 years after a previous stability test date of either the original vessel or an earlier sister vessel,	The approved lightweight characteristics of that earlier vessel are adopted by the sister vessel;
(ii)	Paragraph (a)(6)(i) of this section does not apply, and the	The vertical center of gravity (VCG) of the earlier vessel is adopted

	<p>lightweight characteristics determined from a deadweight survey of the sister vessel are shown to meet both the following criteria:</p> <p>(A) the lightweight displacement differs by not more than 3 percent of the earlier vessel's lightweight displacement, and</p> <p>(B) the longitudinal center of gravity (LCG) differs by not more than 1 percent of the length between perpendiculars (LBP) of the earlier vessel's LCG,</p>	<p>by the sister vessel and used with the lightweight displacement and LCG determined from the deadweight survey of the sister vessel;</p>
(iii)	<p>Neither paragraph (a)(6)(i) nor (ii) of this section apply because both the criteria in paragraphs (a)(6)(ii)(A) and (B) of this section are not met and lightweight characteristics were determined from a stability test on either the original vessel or a sister vessel,</p>	<p>The vessel must undergo a stability test in accordance with 46 CFR part 170, subpart F;</p>
(iv)	<p>No vessel of the class of sister vessels previously underwent a stability test,</p>	<p>One vessel of the class must undergo a stability test in accordance with 46 CFR part 170, subpart F, and each sister vessel to which a stability standard applies must meet either paragraph (a)(6)(ii) or (iii) of this section.</p>

(b) A statement that verifies sister vessel status for each element of paragraph (a) of this section from an individual or entity meeting the requirements of § 144.140 must be retained and produced upon request.

§ 144.160 Marking.

(a) The hull of each documented vessel must be marked as required by part 67 of this chapter.

(b) The hull of each undocumented vessel must be marked with its name and hailing port.

(c) A vessel complying with either § 144.300(a) or § 144.305 must have draft marks that meet the requirements of § 97.40-10 of this chapter.

(d) Each vessel assigned a load line must have the load line marks and the deck line permanently scribed or embossed as required by subchapter E of this chapter.

(e) Each watertight door and watertight hatch must be marked on both sides in clearly legible letters at least 25 millimeters (1 inch) high: "WATERTIGHT DOOR-KEEP CLOSED" or "WATERTIGHT HATCH-KEEP CLOSED".

(f) Each escape hatch and emergency exit used as means of escape must be marked on both sides in clearly legible letters at least 50 millimeters (2 inches) high: "EMERGENCY EXIT, KEEP CLEAR".

Subpart B-Structure

§ 144.200 Structural standards for an existing vessel.

An existing vessel may be deemed by the OCMI, or TPO, to be in compliance with this subpart provided that either:

(a) The vessel is built, equipped, and maintained to conform to the rules of a recognized classification society appropriate for the intended service and routes, but not classed; or

(b) The vessel has been both in satisfactory service insofar as structural adequacy is concerned and does not cause the structure of the vessel to be questioned by either the OCMI, or TPO engaged to perform an audit or survey.

§ 144.205 Structural standards for a new vessel.

(a) Except as provided in paragraphs (b) and (c) of this section, a new vessels must comply with the standards established by the American Bureau of Shipping (ABS) as provided in the following table.

Table 144.205(a) - Structural standards for a new vessel

	<u>For a new vessel to be certificated for service on-</u>	<u>ABS Rules for Building and Classing-</u>
(1)	Lakes, bays, and sounds, limited coastwise, coastwise, and oceans routes;	Steel Vessels Under 90 Meters (295 Feet) in Length (incorporated by reference, see § 136.112 of this subchapter)

		apply; or
(2)	Rivers or intracoastal waterways routes.	Steel Vessels for Service on Rivers and Intracoastal Waterways (incorporated by reference, see § 136.112 of this subchapter) apply.

(b) Alternate design standards to comply with this subpart may be approved in accordance with § 136.115 of this subchapter.

(c) The current standards of a recognized classification society, other than ABS, may be used provided they are accepted by the Coast Guard as providing an equivalent level of safety.

(d) The structural standard selected must be applied throughout the vessel including design, construction, installation, maintenance, alteration, and repair. Deviations are subject to approval by the Commanding Officer, Marine Safety Center.

§ 144.215 Special consideration.

The cognizant OCMI may give special consideration to the structural requirements for a vessel if that vessel is:

- (a) Not greater than 65 feet in length;
- (b) Operating exclusively within a limited geographic area; or

(c) Of an unusual design not contemplated by the rules of the American Bureau of Shipping or other recognized classification society.

Subpart C-Stability and Watertight Integrity

§ 144.300 Stability standards for an existing vessel.

(a) The owner or managing operator of an existing vessel operating under a stability document must be able to readily produce a copy of such document.

(b) The owner or managing operator of an existing vessel not operating under a stability document must be able to show at least one of the following:

(1) The vessel's operation or a history of satisfactory service does not cause the stability of the vessel to be questioned by either the Coast Guard or a TPO engaged to perform an audit or survey.

(2) The vessel performs successfully on operational tests to determine whether the vessel has adequate stability and handling characteristics.

(3) The vessel has a satisfactory stability assessment by means of giving due consideration to each item that impacts a vessel's stability characteristics which include, but are not limited to, the form, arrangement, construction, number of decks, route, and operating restrictions of the vessel.



§ 144.305 Stability standards for a new vessel.

Each new vessel must meet the applicable stability requirements of part 170 and, if applicable, of part 173, subpart E, of this chapter in addition to the requirements in the following table:

Table 144.305 - Stability standards for a new vessel

	<u>Each new vessel certificated to operate on--</u>	<u>must meet the requirements of--</u>
(a)	Protected waters	§ 170.173(e) (2) of this chapter.
(b)	Partially protected waters	§§ 170.170 and 170.173(e) (1) of this chapter.
(c)	Exposed waters or that is assigned a load line	§§ 170.170 and 174.145 of this chapter.

§ 144.310 Lifting requirements for a new vessel.

Each new vessel equipped for lifting must meet the requirements of part 173, subpart B, of this chapter.

§ 144.315 Weight and moment history requirements for a vessel with approved lightweight characteristics.

(a) A weight and moment history of changes to the vessel since approval of its lightweight characteristics (displacement, Longitudinal Center of Gravity (LCG) and Vertical Center of Gravity (VCG)) must be maintained. All weight modifications to the vessel (additions, removals,

and relocations) including a calculation of the aggregate weight change (absolute total of all additions, removals, and relocations) must be recorded in the history, along with a description of the change(s), when and where accomplished, moment arms, etc. After each modification, the lightweight characteristics must be recalculated.

(b) When the aggregate weight change is more than 2 percent of the vessel's approved lightweight displacement, or the recalculated change in the vessel's lightweight LCG is more than 1 percent of the LBP, a deadweight survey must be performed to determine the vessel's current lightweight displacement and LCG. Use the following table to determine when the deadweight survey results or the vessel's aggregate weight change requires the vessel to undergo a specified stability test:

Table 144.315

	<u>If-</u>	<u>Then-</u>
(1)	The deadweight survey results are both within 1 percent of the recalculated lightweight displacement and within 1 percent LBP of the recalculated lightweight LCG,	the recalculated lightweight VCG can be accepted as accurate;
(2)	The deadweight survey results do not meet the criteria of paragraph (b)(1) of this section,	the vessel must undergo a stability test in accordance with 46 CFR 170, subpart F;

(3)	The aggregate weight change is more than 10 percent of the vessel's approved lightweight displacement,	the vessel must undergo a stability test in accordance with 46 CFR 170, subpart F.
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§ 144.320 Watertight or weathertight integrity.

(a) Each vessel fitted with installed bulwarks around the exterior of the main deck must have sufficient freeing ports or scuppers or a combination of freeing ports and scuppers to allow water to run off the deck quickly without adversely affecting the stability of the vessel.

(b) Closure devices must be provided for deckhouse or hull penetrations, which open to the exterior of the vessel and which may allow water to enter the vessel. These devices must be suitable for the expected route.

§ 144.330 Review of a vessel's watertight and weathertight integrity.

The cognizant OCMI may require review of a vessel's watertight and weathertight integrity. This review may be performed by an individual who meets the requirements of § 144.140. The review may include an examination of a plan that shows the original placement of decks and bulkheads.

Subpart D-Fire Protection

§ 144.400 Applicability.

Except for § 144.415, which applies to each new and existing vessel, this subpart applies to each new towing vessel.

§ 144.405 Fire hazards to be minimized.

Each vessel must be designed and constructed to minimize fire hazards insofar as reasonable and practicable.

§ 144.410 Separation of machinery and fuel tank spaces from accommodation spaces.

Machinery and fuel tank spaces must be separated from accommodation spaces by bulkheads. Doors may be installed provided they are the self-closing type.

§ 144.415 Combustibles insulated from heated surfaces.

Internal combustion engine exhaust ducts, galley exhaust ducts and similar ignition sources must be insulated with noncombustible insulation if less than 450 mm (18 inches) away from combustible material. Installations in accordance with ABYC P-1 or NFPA 302 (incorporated by reference, see § 136.112 of this subchapter) will be considered as meeting the requirements of this section.

§ 144.425 Waste receptacles.

Unless other means are provided to ensure that a potential waste receptacle fire would be limited to the receptacle, waste receptacles must be constructed of noncombustible materials with no openings in the sides or bottom.

§ 144.430 Mattresses.

Each mattress must comply with either:

(a) The Consumer Product Safety Commission Standard for Mattress Flammability (FF 4-72, Amended), 16 CFR part 1632, subpart A, and not contain polyurethane foam; or

(b) IMO Resolution A.688(17) (incorporated by reference, see § 136.112 of this subchapter) in which case the mattress may contain polyurethane foam.

Subpart E-Emergency Escape

§ 144.500 Means of escape.

Where practicable and except as provided in § 144.515, each space where crew may be quartered or normally employed must have at least two means of escape. Arrangements on an existing vessel may be retained if it is impracticable or unreasonable to provide two means of escape.

§ 144.505 Location of escapes.

The two required means of escape must be widely separated and, if possible, at opposite ends or sides of

the space. Means may include normal and emergency exits, passageways, stairways, ladders, deck scuttles, doors, and windows.

§ 144.510 Window as a means of escape.

On a vessel of 65 feet (19.8 meters) or less in length, a window or windshield of sufficient size and proper accessibility may be used as one of the required means of escape from an enclosed space, provided it:

- (a) Does not lead directly overboard;
- (b) Is suitably marked; and
- (c) Has a means to open the window or break the glass.

§ 144.515 One means of escape required.

Only one means of escape is required from a space where:

- (a) The space has a deck area less than 30 square meters (322 square feet);
- (b) There is no stove, heater, or other source of fire in the space;
- (c) The means of escape is located as far as possible from a machinery space or fuel tank; and
- (d) If an accommodation space, the single means of escape does not include a deck scuttle or a ladder.

Subpart F- Ventilation

§ 144.600 Ventilation for accommodations.

Each accommodation space on a vessel must be ventilated in a manner suitable for the purpose of the space.

§ 144.605 Means to stop fans and close openings.

Means must be provided for stopping each fan in a ventilation system serving machinery spaces and for closing, in case of fire, each doorway, ventilator, and annular space around funnels and other openings into such spaces.

§ 144.610 Ventilation in a vessel more than 65 feet in length.

A vessel of more than 65 feet (19.8 meters) in length with overnight accommodations must have a mechanical ventilation system unless a natural system, such as opening windows, portholes, or doors, will provide adequate ventilation in ordinary weather.

Subpart G-Crew Spaces

§ 144.700 General requirements.

(a) A crew accommodation space and a work space must be of sufficient size, adequate construction, and with suitable equipment to provide for the safe operation of the vessel and the protection and accommodation of the crew in

a manner practicable for the size, facilities, service, route, and modes of operation of the vessel.

(b) The deck above a crew accommodation space must be located above the deepest load waterline.

§ 144.710 Overnight accommodations.

Overnight accommodations must be provided for crewmembers if it is operated more than 12 hours in a 24-hour period, unless the crew is put ashore and the vessel is provided with a new crew.

§ 144.720 Crew rest consideration.

The condition of the crew accommodations must consider the importance of crew rest. Factors to consider include vibrations, ambient light, noise levels, and general comfort. Every effort must be made to ensure that quarters help provide a suitable environment for sleep and off-duty rest.

Subpart H-Rails and Guards

§ 144.800 Handrails and bulwarks.

(a) Rails or equivalent protection must be installed near the periphery of all decks accessible to crew. Equivalent protection may include lifelines, wire rope, chains, and bulwarks that provide strength and support equivalent to fixed rails.



(b) In areas where space limitations make deck rails impractical, such as at narrow catwalks in way of deckhouse sides, hand grabs may be substituted.

§ 144.810 Storm rails.

On a vessel in oceans or coastwise service, suitable storm rails or hand grabs must be installed in all passageways and at the deckhouse sides where persons onboard might have normal access.

§ 144.820 Guards in dangerous places.

An exposed hazard such as gears and rotating machinery, must be protected by a cover, guard or rail. This is not meant to restrict access to towing equipment such as winches, drums, towing gear or steering compartment equipment necessary for the operation of the vessel.

§ 144.830 Protection against hot piping.

Each exhaust pipe from an internal combustion engine which is within reach of personnel must be insulated or otherwise guarded to prevent burns. On a new vessel, each pipe that contains vapor, gas, or liquid that has a temperature exceeding 150 °F (65.5 °C) which is within reach of personnel must be insulated where necessary or otherwise guarded to prevent injury.

Subpart I-Visibility

§ 144.905 Operating station visibility.

(a) Windows and other openings at the operating station must be of sufficient size and properly located to provide a clear field of vision for safe operation in any condition.

(b) Means must be provided to ensure that windows immediately forward of the operating station in the pilothouse allow for adequate visibility to ensure safe navigation regardless of weather conditions. This may include mechanical means such as windshield wipers, defoggers, clear-view screens, or other such means, taking into consideration the intended route of the vessel.

(c) The field of vision from the operating station on a new vessel must extend over an arc from dead ahead to at least 60 degrees on either side of the vessel.

(d) If a new vessel is towing astern, the operating station must be provided with a view aft.

(e) In a new vessel, glass or other glazing material used in windows at the operating station must have a light transmission of not less than 70 percent according to Test 2 of ANSI/SAE Z 26.1-1996 (incorporated by reference, see § 136.112 of this subchapter) and must comply with Test 15 of ANSI/SAE Z 26.1-1996 for Class I Optical Deviation.

§ 144.920 Window or portlight strength in a new vessel.

(a) Each window or portlight, and its means of attachment to the hull or the deckhouse, must be capable of withstanding the maximum expected load from wind and waves, due to its location on the vessel and the vessel's authorized route.

(b) Any covering or protection placed over a window or porthole that could be used as a means of escape must be able to be readily removed or opened from within the space.

(c) Glass and other glazing materials used in windows of a new towing vessel must be materials that will not break into dangerous fragments if fractured.

PART 199-LIFESAVING SYSTEMS FOR CERTAIN INSPECTED VESSELS

14. The authority citation for part 199 continues to read as follows:

Authority: 46 U.S.C. 3306, 3703; Pub. L. 103-206, 107 Stat. 2439; Department of Homeland Security Delegation No. 0170.1.

15. In § 199.01, redesignate paragraphs (a)(3) and (4) as paragraphs (a)(4) and (5), respectively, and add new paragraph (a)(3) to read as follows:

§ 199.01 Purpose.

(a) \* \* \*

(3) Towing vessels, which are covered by subchapter M of this chapter;

\* \* \* \* \*

16. Amend § 199.10 as follows:

a. Revise Table 199.10(a); and

b. In paragraph (b) after the words "small passenger vessels;" add the words "towing vessels;".

The revision reads as follows:

§ 199.10 Applicability.

(a) \* \* \*

Table 199.10(a)—Lifesaving Requirements for Inspected  
Vessels.

Row	46 CFR	Vessel Type	Vessel Service	Subchapter W Subparts applicable <sup>1</sup>						Other <sup>2</sup>
	Subchapter			A	B	C	D	E	F	
1	D	Tank ≥500 tons	International voyage <sup>3</sup>	X	X		X			
2	D	Tank <500 tons	International voyage <sup>3</sup>	X	X		X	X	X	
3	D	Tank	All other services	X	X		X	X	X	
4	H	Passenger	International voyage <sup>3</sup>	X	X	X				
5	H	Passenger	Short Inter'l voyage <sup>3</sup>	X	X	X				
6	H	Passenger	All other services	X	X	X		X	X	
7	I	Cargo ≥500 tons	International voyage <sup>3</sup>	X	X		X			
8	I	Cargo <500 tons	International voyage <sup>3</sup>	X	X		X	X	X	
9	I	Cargo	All other	X	X		X	X	X	

			services							
10	I-A	MODU	All							46 CFR part 108
11	K	Small Passenger	International voyage <sup>3</sup>	X	X	X				
12	K	Small Passenger	Short Inter'l voyage <sup>3</sup>	X	X	X				
13	K	Small Passenger	All other services							46 CFR part 117
14	L	Offshore Supply	All							46 CFR part 133
15	M	Towing Vessels	International voyage <sup>3</sup>	X	X		X			
16	M	Towing Vessels	All other							46 CFR part 141
17	R-Part 167	Public Nautical School	International voyage <sup>3</sup>	X	X	X <sup>4</sup>	X <sup>5</sup>			
18	R-Part 167	Public Nautical School	All other services	X	X	X <sup>4</sup>	X <sup>5</sup>	X	X	
19	R-Part 168	Civilian Nautical School	International voyage <sup>3</sup>	X	X	X <sup>4</sup>	X <sup>5</sup>			
20	R-Part 168	Civilian Nautical School	All other services	X	X	X <sup>4</sup>	X <sup>5</sup>	X	X	
21	R-Part 169	Sailing School	All services							46 CFR 169.500
22	T	Small Passenger	International voyage <sup>3</sup>	X	X	X				
23	T	Small Passenger	Short Int'l voyage <sup>3</sup>	X	X	X				
24	T	Small Passenger	All other services							46 CFR part

										180
25	U	Oceanographic Res.	International voyage <sup>3</sup>	X	X	X <sup>4</sup>	X <sup>5</sup>			
26	U	Oceanographic Res.	All other services	X	X	X <sup>4</sup>	X <sup>5</sup>	X	X	

Notes:

<sup>1</sup> Subchapter W of this chapter does not apply to inspected nonself-propelled vessels without accommodations or work stations on board.

<sup>2</sup> Indicates section where primary lifesaving system requirements are located. Other regulations may also apply.

<sup>3</sup> Not including vessels solely navigating the Great Lakes of North America and the Saint Lawrence River as far east as a straight line drawn from Cap des Rosiers to West Point, Anticosti Island and, on the north side Anticosti Island, the 63rd meridian.

<sup>4</sup> Applies to vessels carrying more than 50 special personnel, or vessels carrying not more than 50 special personnel if the vessels meet the structural fire protection requirements in subchapter H of this chapter for passenger vessels of the same size.

<sup>5</sup> Applies to vessels carrying not more than 50 special personnel that do not meet the structural fire protection requirements in subchapter H of this chapter for passenger vessels of the same size.

\* \* \* \* \*

Dated: May 25, 2016.

Paul F. Zukunft,  
Admiral, U.S. Coast Guard,  
Commandant.

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